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NO. XI.

A. B. ALLEN, Editor.

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HOW TO MAKE SAUR-KRAUT.

TAKE as many drum-head cabbages, or any other kind having a firm heart, as you wish to preserve, tear off the outer leaves, quarter them, cut out the stalks, and chop the remainder into small pieces by hand or with a machine. Then, to every 100 lbs. of cabbage, take 3 lbs. of salt, $\frac{1}{4}$ lb. of caraway-seed, and 2 oz. of juniper-berries, and mix them together in a dish or bowl. Then procure as many clean casks, strongly hooped with iron, as may be required, and fill them with layers of the chopped cabbages, about 3 inches thick, sprinkling each layer, as it is pressed in, with the mixture of caraway-seed, juniper-berries, and salt. When each cask is full, lay over it a coarse linen cloth and a wooden follower or lid, just fitting within the mouth of the cask, upon which must be placed a stone or weight sufficiently heavy to prevent it from rising, and allow it to ferment for a month. The cabbage produces a great deal of water, which floats around the sides of the casks to the top of the follower or lid. This must be poured off, and its place supplied with a solution of lukewarm water, whole black pepper, and common salt, taking care that the cabbage is always covered with brine. In order to keep the kraut fresh and for a long time, the casks should be placed in a cool situation as soon as a sour smell is perceived.

Uses, &c.—Saur-kraut is not only a wholesome vegetable, but also one of the best preventives of the sea-scurvy that we have. Consequently, no vessel bound on a long voyage, particularly through hot climates, where the common potato will not keep, should sail without a full supply of this healthful food. It may be served up for the table, prepared in a similar manner as fresh cabbage; or it may be washed in soft water, and then stewed in a stove, or oven, for three hours with just sufficient

water to cover it with the addition of a little butter, taking care to stir it now and then, or it will burn. At the end of two hours, put in some sausages, pork, bacon, or any kind of meat you like, but corned pork is generally used. If any be left it is equally good warmed over. Served up in this way, it forms a very nutritious dish, and is much relished by those who have long been accustomed to its use. As this is the true "Saur-Kraut" of the Germans, it may not, on the first trial, prove agreeable to the olfactories of all our American readers; but it hardly need be said, that it is a standing winter-dish at the tables of the rich in Germany, cooked either by the process of slowly stewing, with a little water alone, or with a small piece of bacon or corned pork, and sent to table in the same dish.

APPLE-ORCHARDS.—No. 3.

PREPARATORY to the planting of an orchard, it is desirable to determine the quality of the fruit of seedlings at as early an age as possible, and to know whether they are to be cut off at the ground and grafted, or to be preserved entire. In order to do this, the following devices have long been practised and have usually been attended with success. Any time within the month of May or June, select a horizontal branch of the tree designed to be rendered fruitful, and remove from the part near its junction with the trunk, a ring of bark from one-fourth to one-half of an inch in breadth, taking precaution, at the same time, to rub off, within the space operated upon, *every part* of the bark, quite to the sap-wood, in order to obstruct the descending juices in the succeeding autumn. Another expedient employed for the same purpose is, to make two turns of a copper-wire closely round the bark, with a repetition of the operation at some distance below, and leave it to be incorporated by the growth

of the tree. Should either of these devices prove insufficient, or should the healing of the wounded parts follow too quickly, the operations may be repeated in the same, or in the following season. The total removal of a ring of bark produces the desired effect, sooner, by a whole year, than a mere stricture upon it, although the pressure from the wire of itself, finally kills the bark underneath. Alkaline, or ammoniacal preparations have also been applied to young trees, as well as to old ones, for the purpose of stimulating their growth and accelerating their fruitfulness, such as white-washing their trunks and branches, rubbing them with soap-suds, and spreading round them shell-lime, gypsum, charcoal, ashes, &c.: and, "human urine," says Columella, "which you have let grow old for six months, is well fitted for the shoots of young trees. If you apply it to vines, or to young apple-trees, there is nothing that contributes more to make them bear an abundance of fruit; nor does this only produce a greater increase, but it also improves both the taste and the flavor of the wine, and of the apples."

Apple-trees are generally fit for planting out in the orchard at about the age of seven years, at which time, if they have been properly treated in the nursery, they will be about an inch and a half in diameter at the middle of the stem. The particular age, however, at which they should be removed to their final destination, after they have formed a good head, is not very important, provided they do not much exceed the above-named size; and the objection to a larger size, is the difficulty of taking them up with a due proportion of roots, so as to prevent them from receiving too great a check. If trees are to be purchased from a nursery, either as seedlings, or ready grafted, and the sorts cannot be relied upon, they should be inspected in the previous summer while in leaf; and those selected which give the greatest promise of making good and healthy trees, and the most likely to be good bearers. They should have full and flourishing heads, and broad, roundish leaves, as such generally bear the largest fruit, and the most abundant crops. In winter, such trees will present a larger and fuller bud than those the leaves of which are small and pointed; but though these are favorable indications of the size of the fruit, and the productiveness of the tree, they are by no means so with regard to other qualities; as the trees may be early or late bearers, and the fruit red, yellow, or green; and whether they will produce either good cider-apples, or those better adapted to the table, can only be known when they produce their first fruit. If they then prove not such as are desired, or there be too great a proportion of one sort, grafting or budding in the head should be had recourse to. This will, it is true, protract the time of bearing a year or two; but it is much better to submit to two or even three years' delay, than for a hundred years to have bad fruit. The most proper time for planting out, is soon after the trees have shed their leaves. They should be taken up with their lateral roots at least two feet in length, and planted as soon as possible. In planting orchards, the ground for the space of at least six feet in diameter should be trenched two spades deep, the lowermost of which should be cast away, and the other well bro-

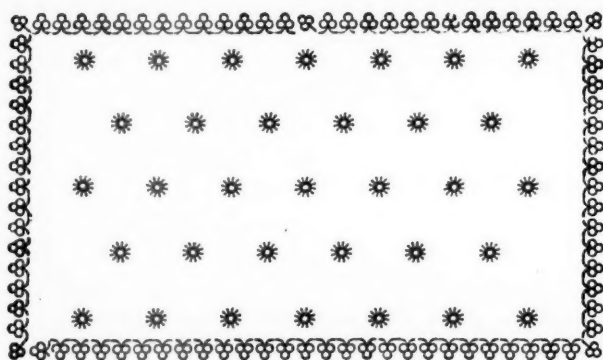
ken with a spade or otherwise, and the place of the former supplied with turf, or a compost of stable-dung, a small portion of leaf-mould or charcoal, well mixed with a little shell-lime, wood-ashes, soda, or other alkaline substance. It is of some importance that the tree, when planted, should stand in the same position with regard to the sun, as that in which it grew in the nursery; and, in order to insure this, the south or north side of each tree should be marked before it is removed, and this might be done at the time of selection. Care should be taken to surround the roots with the finest part of the mould, and to plant the trees at precisely the same depth as that at which they before grew. The ragged or lacerated ends of the roots should be taken off with the knife; and the hole, after being duly prepared as above, opened wide enough to admit the longest of them. If the ground at the time of planting be dry, and water can be conveniently procured two or three bucketfuls, applied to each of the trees, will be of essential service in securing its growth. The tree, being temporarily fixed in its proper position by a single stake, the hole should be nearly filled with mould, and the water poured upon it. After a few hours, the remaining mould may be added, and well trodden down. If, in the ensuing spring, a thick dressing of a well-mixed compost of lime and earth be laid over the space that has been opened round each tree, and afterwards dug in, it will be highly beneficial to it; and digging or forking round the trees should be repeated for three or four years in succession. After this period, it is probable that the leaves falling from the trees, will be nearly or quite adequate to the supply of all the organic or gaseous substances required for the perfection of their fruit; therefore, it is in the mechanical state, and to the inorganic constitution of the soil that we are to look for those conditions which are either favorable or unfavorable to the growth and productiveness of such trees. It is not enough that the soil be neither too open nor too retentive for the supply of a due degree of moisture; it must also contain those inorganic or mineral substances which the tree and its fruit require. When the defects are known, the remedies are obvious. By draining and trenching only, a stiff soil may probably be rendered favorable to the production of fruit; and, if this operation fail to produce the desired effect, it is evident that mineral manures are wanting, which may be supplied by heavy dressings of lime, or peat-ashes, or both. If the soil be too porous, a heavy dressing of marl is the best remedy; and when this cannot be procured, clay, with lime, and peat or other ashes, will supply its place.

The distance at which trees should be planted in an orchard must be from forty to sixty feet apart, according to the richness of the soil; for it should always be remembered that the roots extend far beyond the branches; or another mode may be adopted that will answer for the present generation and for posterity. This may be effected by planting what may be called *principal* trees, at the distances which their full growth will require, and placing between them, either as standards, or as dwarfs, *supernumerary* trees, to remain until the principal ones shall require them to be removed. The supernumeraries, in this case, will have a peculiar

value; since, if they be dwarfs, they will immediately come into bearing, and will ripen their fruit early in the season, which can be gathered with great facility; and if it falls to the ground, will often escape from being bruised. Dwarfs, too, may easily be pruned, and very conveniently thinned of their superfluous fruit; or, they may be readily cleansed from every offending thing, or supplied with nutritious washes. On the other hand, if the supernumeraries be seedlings or grafts, they will be ready for the supply of such vacancies as will have occurred amongst the standards, from accident or disease, at the time of removal. Among other advantages resulting from the wide planting of orchards, may be mentioned the healthful and invigorating influence of the sun on every part of the trees, and thereby causing them to bring forth more fruit, and that which is larger, fairer, and better flavored; for an apple, of a globular form, three inches in diameter, contains twenty-seven times more bulk than one of an inch in diameter (globes being to each other as the cubes of their diameters). Hence ap-

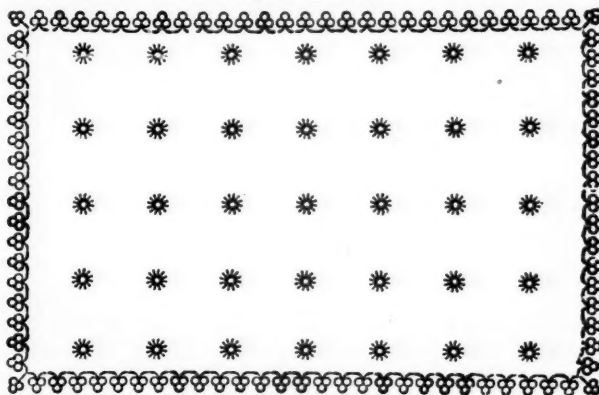
ples are not to be valued by their number only, but by their size; and indeed, by their weight; for most weight must be expected where there is most juice, and juice will follow health and vigor.* Another important advantage is, that trees planted at wide intervals from each other, have more room to spread, without the interference of their roots and branches, and consequently will bear a greater quantity of fruit. A tree with a hemispherical head, fifty feet in diameter, will have twenty-five times as much fruit-bearing surface, as one of the same formed head ten feet in diameter. In other words, circumstances being equal, it would produce as much fruit as twenty-five of the smaller trees, although it would occupy but little more than one-half as much ground.

The usual mode of planting out trees in an orchard, is the *square-form*; but the system most esteemed and adopted by the ancients, was to plant them in *quincuncem*; that is, in the form of the Roman numeral V. The two modes may be illustrated by the following diagrams:—



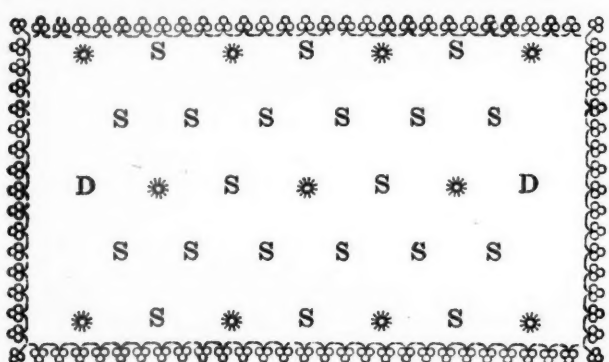
QUINCUNX-FORM.—FIG. 80.

The quincunx, when compared with the square-form, saves one-eighth of the ground, and has the advantage of disposing of the trees at equal distances apart in every direction. The vacant spaces which will be left at the ends of every other row of standards, may be filled with supernumerary dwarf-trees, and allowed to remain permanently. To plant temporary trees between the principal ones, so as to divide the distances into halves, will require about



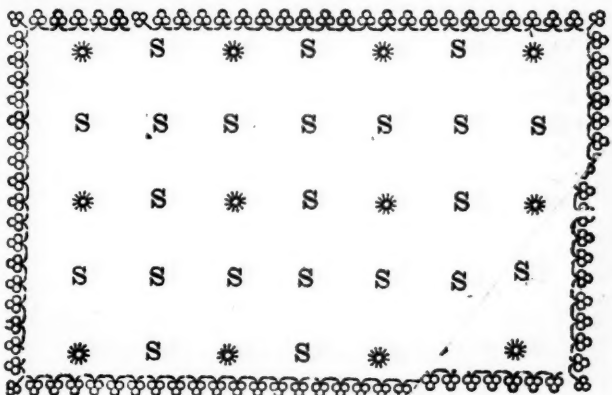
SQUARE-FORM.—FIG. 81.

two supernumeraries for every principal one, by the square-form, and a less number by the quincunx-form, if dwarf-standards are allowed to remain in the vacant spaces which occur at the ends of every other row. This will be more clearly understood by an inspection of the diagrams below, in which the asterisks (*) denote the standard-trees, (D) the permanent dwarfs, and (s) the supernumerary trees.



QUINCUNX-FORM.—FIG. 82.

The following is a practical method of laying out an orchard by the quincunx-form:—First, determine the points for the centre of each tree in the outer row, by setting stakes at equal distances apart



SQUARE-FORM.—FIG. 83.

—say fifty feet. Take a line one hundred feet in length, with a knot or mark in its middle, and place its two ends at two contiguous stakes; then

* Papers of Mass. Agr. Soc., 1804, p. 85

extend the knot or mark till the whole line becomes stretched in two equal lengths, and the knot or mark will indicate the place for a tree in the next row, where there should be driven another stake. Repeat the same operation with a second pair of stakes in the outer row, and another point will be determined in the next row, where there must also be inserted a stake. In like manner, continue with all the other stakes, checking, in the meantime, each of the stations by oblique, cross, and longitudinal sights, till the whole be completed. Every tree in such an orchard will be fifty feet from each of its neighbors; but the rows will be only forty-three and three-tenths feet apart; and this distance is to fifty feet nearly as seven is to eight. Consequently, one-eighth of the ground will be saved, as intimated above.

CULTIVATION OF TURNIPS.—No. 5.

Consumption of the Crop.—It is generally admitted, that the nutritive properties of most kinds of vegetables are due to the quantity and quality of the dry matter contained in them, and that their water, although it may serve a useful purpose in filling the stomach, cannot fatten animals, by itself, or contribute directly to make flesh. Hence it would follow, that, from the large proportion of water it contains (about 90 per cent.), the fattening qualities of the turnip must be small. Indeed, experience has shown in the western counties of Scotland, and it is the opinion of the majority of farmers in this country, that cattle cannot be fattened on turnips alone, and that laboring animals fed on roots of any kind, as their chief food, cannot perform their work with ease to themselves or with economy to their owners. It is also well known, that all animals thrive better on a mixed diet, than when kept on the same kind of food, let it be ever so nutritious and rich.

Store-cattle, in Great Britain, are now generally allowed turnips; the old system of just keeping them alive, being almost entirely exploded. In those districts, even, where they are fed on straw and occasionally on coarse hay, with an allowance of turnips, they are ready thrivers when afterwards put to grass, and also prove more true to the butcher. This system of feeding from birth, has greatly gained ground, and cattle of the Short-Horn and other improved breeds, are now brought to the butcher before they have quite completed their second year. This could not be done if they had not been well stored and kept upon healthful food from the beginning.

It is recommended that the food of store-cattle should be supplied at regular periods and by the same man. The first thing in the morning the cribs or racks to be cleared of the unconsumed straw, which should be thrown into the yard. Fresh straw should then be given them, and their troughs thoroughly cleaned, and replenished with a supply of turnips newly cut, as young cattle are often incapable of eating a whole turnip on account of the tender state of their mouths. They should always have in their yards a constant supply of clear, fresh water. After they have been furnished with their breakfast, they ought to be kept as quiet as possible, in order that they may chew their cud in peace. The second supply of food should be furnished be-

fore they become uneasy and call for it, or betake themselves to the dirty straw of the yard to allay their hunger.

The consumption of the turnip-crop by *fattening cattle*, is now regarded as of the first importance; and, on some farms, in England, by far the greatest proportion, in that manner, is disposed of. The cattle, for convenience, are generally tied up in stalls; but sometimes they are turned into one apartment, in lots of four or five together, each having a separate trough, fixed against the wall and guarded by a kind of stake, so that only one can approach it at a time. No animal of a restless or quarrelsome disposition is allowed, on any account, to be put with the others. Many cattle, however, are brought to a high state of fatness, which are fed in yards well protected from cold winds, with a shed partly closed and facing the south.

As in the case of the store-cattle, those under the operation of fattening should be fed regularly and at stated times—cleaned out at the same hour every day, and when fed and cleaned, no person should be allowed to enter and disturb them. There is a saying in some parts of Scotland, that, “every time a byre of cattle is disturbed, a shilling is lost to the owner.” The greatest care should be observed to clean out the troughs every day; as the food left to decay in them, must be particularly annoying and disgusting to a poor beast kept tied with his nose directly over them. When fed on a full supply of turnips, they will require little or no water to drink.

It seldom happens that cattle are entirely fattened on turnips alone, as they would be by far too relaxing. Some other kinds of food should be given them, such as sweet, clean straw or hay, oil-cake, shorts, ship-stuffs, crushed corn, Indian meal, &c. When any one of these articles is used in conjunction with turnips, it should be given at a particular time of day, and the hour by no means changed—there cannot be too much regularity in their management. A lump of rock-salt, sufficiently large not to be taken into their mouths whole, should be constantly kept within reach of the cattle, as they are extremely fond of licking it; besides, it is thought to whet their appetites, promote the secretion of bile, and, in general, is favorable to their activity and health. It is now well understood that turnips, when sliced, afford great facilities to cattle in devouring their food with the least trouble, and render them less liable to become choked; for, when a beast gets a whole bulb into his mouth, he throws back his head, so that the turnip may drop between the molar teeth, and it often happens that it rolls into his throat.

Another very important operation, and one which is too often neglected, is the cleaning of the turnips before feeding them out to cattle. This can readily be done by putting them into a basket and immersing it in a tub, or a pond or stream of water, rolling the turnips about with a stick. On lifting the basket out of the water, it will be found that the turnips will be sufficiently clean.

The feeding of the turnip-crop, or rather a portion of it, by sheep, where it can be practised, is a very desirable method of consuming it. All sheep fed on turnips should also be supplied with hay or straw; but those under the process of fattening should be supplied with some of the richer kinds

of food, such as oil-cake, bean-meal, shorts, ship-stuffs, Indian meal, crushed corn, &c. A precaution, however, must be observed in first giving them rich food, that they be in pretty good condition before they are put to high feeding, and that the rich food be gradually increased both in quantity and quality. The plan of feeding in many of the well-informed parts of England, is, to supply the sheep daily with turnips, in order that they may have them fresh, and eat them as they come, without eating the dainty bits first. When a fresh portion is supplied, it should be done in the *afternoon*, when the sheep are not so very hungry, in consequence of which, there will be less danger of their hurting themselves by over-eating. Sheep fed on turnip-tops, should never receive them wet, either with rain, dew, or snow.

THE DOMESTIC FLORA OF CHINA.—No 5.

Dwarf-Trees.—The dwarfed trees of the Chinese and Japanese have been noticed by every author who has written upon these countries, and all have attempted to give some description of the method by which the effect is produced. The process is in reality a very simple one, and is based upon one of the commonest principles of vegetable physiology. We all know that anything which retards in any way the free circulation of the sap, also prevents to a certain extent the formation of wood and leaves. This may be done by grafting, by confining the roots, withholding water, bending the branches, or in a hundred other ways which all proceed upon the same principle. This principle is perfectly understood by the Chinese, and they make nature subservient to this particular whim of theirs. We are told that the first part of the process is to select the very smallest seeds from the smallest plants, which is not at all unlikely, but I cannot speak to the fact from my own observation. I have, however, often seen Chinese gardeners selecting suckers and plants for this purpose from the other plants which were growing in their garden. Stunted varieties were generally chosen, particularly if they had the side branches opposite or regular, for much depends upon this; a one-sided dwarf tree is of no value in the eyes of the Chinese. The main stem was then in most cases twisted in a zigzag form, which process checked the flow of the sap, and at the same time encouraged the production of side branches at those parts of the stem where they were most desired. When these suckers had formed roots in the open ground, or kind of nursery where they were planted, they were looked over and the best taken up for potting. The same principles, which I have already noticed, were still kept in view, the pots used being narrow and shallow, so that they held but a small quantity of soil compared with the wants of the plants, and no more water being given than what was barely sufficient to keep them alive. Whilst the branches were forming, they were tied down and twisted in various ways; the points of the leaders and strong growing ones were generally nipped out, and every means was taken to discourage the production of young shoots which were possessed of any degree of vigor. Nature generally struggles against this treatment for a while, until her powers seem in a great measure exhausted, when she quietly yields to the power of art. The

Chinese gardener, however, must be ever on the watch, for should the roots of his plants get through the pots into the ground, or happen to be liberally supplied with moisture, or should the young shoots be allowed to grow in their natural position for a short time, the vigor of the plant which has so long been lost will be restored, and the fairest specimen of Chinese dwarfing destroyed. Sometimes, as in the case of peach and plum-trees, which are often dwarfed, the plants are thrown into a flowering state, and then, as they flower freely year after year, they have little inclination to make vigorous growth. The plants generally used in dwarfing are pines, junipers, cypresses, bamboos, peach, and plum-trees, and a species of small-leaved elm (a).

(a) In our August number an allusion was made to the passion the Chinese have for miniature plants, which forcibly reminds us of an incident that occurred on our late excursion over the Long Island railroad. Among our company were Hee-Sing, high priest of the Chinese junk, which had lately arrived in our port, and his no less famous artist and companion, Sum-Sing, both of whom were characterized by their medium size, copper complexions, high cheek-bones, and straight black hair, similar in appearance to our native Indians. They were gaily dressed in loose flowing robes of variously-colored silks, ornamented with gold buttons. They wore scull-caps closely fitting to the head, and from beneath these hung queer looking tails of long hair, falling nearly to the ground. They carried fans in their hands, which they used to screen their faces from the sun as they walked out, and as our ladies do, to blow them cool. They were of course the observed of all observers during the whole excursion. It was the first time they ever had ridden in a rail-car, and they manifested no little alarm at the shrill whistle of the locomotive, as well as the rapidity of its movement. But being somewhat intelligent men, and Hee-Sing understanding English tolerably well, everything as we passed along was explained to their entire satisfaction. Alighting at Suffolk Station, Sum-Sing found growing among the bushes a dwarf whortleberry, in the form of a miniature tree. "Hai-yah," he exclaimed in great delight, "too muchia handsome," and carefully packed it away, no doubt with the view of exhibiting it among his friends on his return to the Celestial empire, as one of the wonders of the Western world.

TEXAS ENTERPRISE.—A correspondent from Natchitoches, Texas, writes as follows in reference to the opening for enterprise near that place. This section of Texas is rapidly rising into notice. We have a most luxuriant soil, and the health of this region is proverbial. Indeed it may be called the Italy of America. Excellent land, well watered and timbered, can be had for \$1 per acre, and the stock run out the year round, without housing. We are now preparing to clear out the river Angelina for steamboat navigation; and then be within fifteen miles of water-transportation to New Orleans.

A WEST wind and an honest man go to rest together.

FOUNTAINS FOR FARM-BUILDINGS.

A good supply of water for farm-buildings is both useful and necessary. It is convenient for cleaning implements and stables; furnishing drink for stock; and is all-important in case of fire. But few things can be more pleasing than to see a stream of pure water in the neighborhood of a farm-yard, as nothing can be more desirable for the general welfare of the whole farm. What deters many from having fountains is the cost of the thing; but the main source of its expense is the excavation of the earth, to lay down pipes, often coming from a long distance, and generally requiring to be buried at a great depth, in order that no part of the pipe should be higher than the level of the water at the fountain-head.

By searching, very often a spring may be found in the vicinity, on elevated grounds, the water of which may be conducted to the farm-yard, although higher land may intervene. This can be done by means of a long syphon made of metallic pipes, with one extremity two inches in diameter, dipped into the well or spring, the pipes climbing to near the surface, and then going down to the barn-yard, terminating by a mouth of half an inch in diameter. In putting down the pipes, care must be observed that they be laid as near as possible to a uniform curve, with no short crooks, and that the perpendicular height of the highest point of the syphon does not exceed fourteen feet above the fountain-head. After the pipes are carefully adjusted and buried up with earth beyond the reach of frost, in the highest point of the syphon there should be made a hole with a screw-stopper, and a stop-cock at the end at the fountain-head. On the mouth of the tube, at the barn-yard, there should also be fitted a small stopper, pierced with small holes, similar to the cover to a pepper-box, in order to afford the escape of the air. To fill the syphon, begin by opening the stop-cock and the aperture at the top, and then pour in water at the latter, until it begins to gush out at the fountain-head, when the stop-cock must be closed. Continue to pour in water until the pipe is completely filled, at which time the screw-stopper should suddenly be closed, and the two extremities as suddenly opened; and the water will run, without interruption, for months. Should there be a failure in the first attempt to fill the syphon it will be owing to the imperfect expulsion of the air, which is not always a very easy matter; nevertheless, with due care, half an hour is generally sufficient, if the pipe is not of great length.

A FINE POLISH FOR MARBLE.—Common wheat-straw, when burnt to ashes, is found to contain a portion of flinty earth in the form of a most exquisite powder, and may be used to advantage in giving the last polish to marble.

STOMACH-PUMP.

This is an instrument of great value to the farmer to remove poisonous matters or bad food from the paunch of animals. It is also serviceable for administering glysters, and one pump, with a number of tubes of different sizes, will answer for oxen, horses, or sheep. The instrument consists of a syringe, *a*, Fig. 2, having a side opening, *b*, and an ordinary opening at the bottom, *d*. It is used both for throwing fluid into the stomach, &c., and removing it from the body. Fig. 1 shows the fixture for injections. The extremity, *d*, is placed into the pail of water, &c., and a long probang screwed on to the side opening, *b*; by pumping, the fluid is driven along the probang or injection tube. When used to remove matters from the stomach, the probang is screwed on to the lower end, *d*, and introduced; the fluid from the stomach passes out at *b* (Fig. 2).

Where matters are to be removed from the stomach, tepid water is first injected; the syringe is then unscrewed from the probang at *b*, and screwed on at *d*. It is now a stomach pump, and will draw any thin fluids out of the stomach.

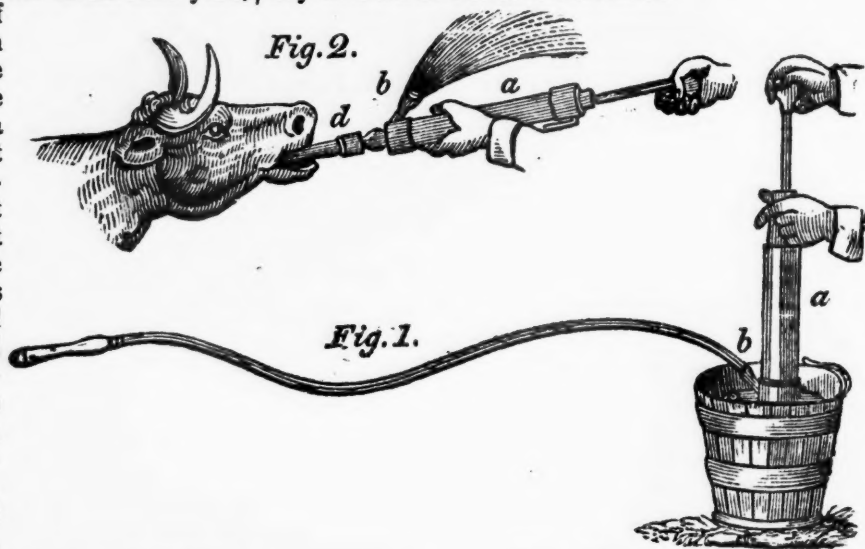


FIG. 84.

The introduction of the pump is effected by the help of an assistant, who holds the animal by a horn and the dividing cartilage of the nose; the operator now takes the tongue in the left hand, and introduces the tube with the right, the assistant holding the head and neck in a straight line, so as to assist the passage. The jaws are kept open by a regular bit of perforated wood, or by any piece of stick introduced between the teeth.—*Gard. Dict.*

HOW TO TOAST CHEESE.—Toasted cheese is much relished by some persons, but it is seldom well prepared. The following directions are said to come from a gentleman who prides himself on his "goostful" appetite. Cut the cheese into slices of moderate thickness and put them into a tinned saucepan, with a little butter and cream. Simmer very gently until quite dissolved. Remove it from the fire, allow it to cool a little, and add some yolk of egg, well beaten; and then make it into convenient shape, brown it before the fire, and eat while it is warm.

CHOICE OF TREES AND SHRUBS FOR CITIES AND RURAL TOWNS.—No. 5.

The *Kentucky Coffee-tree* also occupies a wide geographical range, and is found more or less planted, as a shade-tree, in most, if not all the Middle and Northern States of the Union. Being very hardy, and remarkable for the beauty of its dense foliage, in summer, it forms an appropriate object for planting in parks, and for lining broad avenues, or public highways. But, from its large size, and the unsightly aspect presented by its blunt, naked branches in winter, it seems unfitted for the streets of cities and densely populated towns.

The *Balm of Gilead* (poplar), on account of the medicinal value attached to its buds, and the delightful odor they diffuse through the air, in spring, has been more frequently planted in the neighborhood of human habitations than any of its congeners. It has the advantage of growing in almost every soil, however poor, where it readily attains the size of a second or third-rank tree; but as a subject for planting in streets near dwellings, or in gardens, it is particularly objectionable on account of its long, creeping roots, which run just below the surface, and throw up numerous suckers, difficult to eradicate, when wounded by the spade or plow. And to these objections, may be added the cottony, worm-like aments, with which the ground is strewn, soon after the tree is in flower, and what appears to be more serious still, is the liability of its branches and even the trunk itself, when very tall, to be broken, or shattered by the wind.

The *Catalpa*, from its large bunches of white flowers, marked with purple and yellow spots, with which it is clothed in summer, has been extensively planted in streets, parks, and other ornamental grounds, from the State of Connecticut to Georgia, and westward beyond the Mississippi. This tree is of rapid growth until it reaches the height of twenty feet, which, in a deep, free soil, it will usually attain in ten or fifteen years. Seedling plants, under favorable circumstances, usually begin to bloom at about the age of twelve years; and in situations where the wood becomes well ripened, they are annually loaded with flowers, making a splendid appearance, not only by the large size and lively colors of the blossoms, but by the fine, pale green of their leaves. The *catalpa*, however, does not seem fitted for the general purposes of ornament, as it differs from most other trees by its wide-spreading head, disproportioned in size, when compared with the diameter of the trunk, and in the fewness of its branches, which are late in putting forth leaves in spring, and being among the first to shed them on the appearance of frost in the fall.

The *Silver-leaved Maple*, or *White Maple*, as it is sometimes called, of late, has become a great favorite for ornamenting the streets of cities and populous towns, for which purpose it would be admirably adapted, were it not for the divergent character of its branches, and the great height to which it arrives at an age of twenty or thirty years. The branches are believed to form a head more spacious, in proportion to the size of the trunk, than almost any other tree; and instances are on record where this species has attained the height of fifty feet in twenty-five years. A case in point is now before me, in Brooklyn, where the branches of two

rows of this tree have completely over-arched the public way, although they have not yet been planted fifteen years. There is another objection to this tree when grown near houses; that is, its leaves are preyed upon by several species of insects, but to a less degree than the linden, the abele, the horse-chestnut, and the elm. As an ornamental tree, notwithstanding these objections, the silver-leaved maple is highly prized, on account of the rapidity of its growth, the graceful, divergent character of its branches, the beauty of its leaves, and the profusion of its large early fruits, or keys. It is admirably adapted for large parks as well as open lawns, and for lining broad avenues, or public highways. Like the weeping willow, with which it forms an appropriate associate, it serves an admirable purpose for overspreading artificial ponds, and other waters, with a mirror-like surface, where, as Michaux expresses it, "the brilliant white of the leaves beneath, forms a striking contrast with the bright green above, and the alternate reflection of the two surfaces, in the water, heightens the beauty of this wonderful moving mirror, and aids in forming an enchanting picture."

The *Red-flowered Maple*, or *Soft Maple*, as it is usually called, from its wide geographical range, and great resemblance to its congener, the sugar-maple, has long been planted as an ornamental tree in all the older States of the Union. It is attacked by the same species of insects as the silver-leaved maple, its only objection; and whether viewed in the beauty of its flowers, in early spring, or admired for its red fruit, or keys, in the beginning of summer, or its crimsoned foliage, in autumn, it deserves a place in every situation recommended for the sugar-maple; particularly in localities where the latter will not grow.

The *American Ash*, or *White Ash*, as it is generally called, although occupying a greater extent of territory than most other trees, has not hitherto been much cultivated, either for ornament or other use; but, from the rapidity of its growth, the great value of its timber, when fully grown in open situations, and the beauty of its foliage, which is rarely attacked by insects, this tree deserves to be extensively planted, in lines for bordering roads, and in small groups for ornamenting pastures, parks, and the larger class of lawns.

The *Black Walnut*, from its wide geographical range, and the value attached to its timber and fruit, as also for its shade, has been much planted in the neighborhood of dwellings, in almost every part of the Union. When isolated, in an open space, its branches extend in a horizontal direction to a great distance, forming a spacious head, and consequently an ample shade. Hence this tree can be advantageously substituted for the American elm, for planting in pastures, in parks and lawns, or along public highways.

The *Stag-horn Sumach*, in the Northern and Middle States, is frequently to be met with in front of rural dwellings, where, when trained to a single stem, it forms an interesting little tree, and well deserves to be cherished, from its large and beautiful foliage, its various colors in autumn, and its spikes of dark-red fruit, which diversify the scenery of a northern winter. But as it is of an open, irregular growth, and of not many years' duration, it should

never be placed where it is intended to serve as a screen. The most striking situation in which it can be placed, is when standing alone on a lawn.

The *June-Berry*, or *Shad-blow*, is occasionally to be met with, in gardens and collections, where it is much esteemed, in early spring, for its profusion of flowers, and in autumn, for the fine dark-red assumed by its leaves. Adding to these properties, its limited growth, agreeable fruit, which is eagerly sought after by numerous species of frugivorous birds, and its peculiar adaptation to the climate of almost every part of the territory of the United States, it well deserves a place in every garden and lawn.

The *Osage Orange* (*Maclura*), from its great resemblance to the common orange, its beautiful shining foliage, which it retains longer than almost any deciduous tree, and from its fine, large, golden fruit, is universally admired wherever it will grow. It is perfectly hardy in every State in the Union, south of Massachusetts, is free from the attacks of insects, and is unsurpassed for hedges by no other tree.

To the fore-mentioned trees, might be added the American holly, and several species of the pine and fir tribes; but as the cultivation of evergreens, in themselves, would form the subject of a long essay, as also would our native nuciferous and fruit-bearing trees, as well as our flowering shrubs, they have been necessarily omitted to give place to the remarks on the injudicious selection and improper manner of treating the shade-trees of some of our cities and larger towns.—*Trans. of N. Y. State Ag. Soc.*

LETTERS FROM THE SOUTH.—No. 12.

No country of equal extent on the face of the globe seems to possess such a prodigal affluence, such an unstinted measure of agricultural wealth as the alluvial portions of Louisiana. With an area of delta formation of thousands of square miles, which no combinations of earth or organic materials, for the highest production of vegetable fertility, ever surpassed; with wide-spread luxuriant prairies and rolling productive uplands, every acre of this State seems teeming with the elements of vegetation, the foundation of future wealth, and the sustenance of future millions. And every section of it is accessible within a convenient distance, by navigable waters, or admits of the easy construction of roads. Even the waters which pervade and border the State, would furnish sufficient food for a population larger than now inhabits it. With a climate generally mild and healthful, and with such redundancy of resources for the support of life and the acquisition of wealth, it would seem almost superfluous to suggest the means or the motives for the attainment of either. Actual want or suffering under such circumstances cannot exist, but that absence of individual prosperity is often to be found, that creates a morbid restlessness under present exigencies, and induces efforts for its alleviation in the removal to some fancied *El Dorado* in the yet unexplored wilderness. Such would do well to consider that there is scarcely an acre either of land or water, in Louisiana, that cannot be put to some profitable use, and that, too, near a market whose commerce, reaching to every part of the habitable globe, renders surfeits or over supply absolutely impossi-

ble. Let us consider these products somewhat in detail.

Sugar may be assumed as the leading staple of the State at the present moment. In 1845, there were produced here from nine hundred and fifty-five sugar-mills, 207,337,000 lbs. of sugar, and about 9,330,000 gallons of molasses, amounting together to near \$15,000,000. It is estimated there will be during the present year, 1,240 mills, which, at the same ratio, will carry production up to about \$19,000,000 in this article alone. Accidents, mismanagement, and unforeseen casualties from the elements and the season, will probably lessen the quantity; yet it is certainly within reason to assert, that scientific and careful cultivation, the use of better machinery, the general application of well established chemical principles in the manufacture of the cane, would swell the amount far beyond the assumed maximum.

The extension of cane-cultivation is undoubtedly advancing more rapidly at the present moment than at any former period. Each succeeding year witnesses its extension over new territory. It is descending on both banks of the river nearly to its mouth; it is climbing still higher on the main stream and its tributaries, and it is fast occupying every one of its innumerable bayous or outlets; while more thorough ditching, and especially the adoption of draining-wheels, is rapidly bringing into use larger portions of tillable land in the rear, and making all far more productive. The last we conceive to be one of the most efficient means for reclaiming vast bodies of land for the future cultivation of the cane. Still further means for the augmentation of the crop are to be found in much deeper and more thorough plowing; the use of the subsoil-plow; manuring with the *bagasse* and trash buried between the furrows; and a proper rotation with the cow-pea or other green or vegetable fertilizers.

Cotton may be ranked next in the order of the staples of this state. But a few years since this was the leading product; but while it has been reclaiming new territory and advancing in quantity, in much of the old, the greater profit afforded by the cane has enabled the latter to usurp many of the plantations hitherto exclusively devoted to the former. In the cultivation of this leading export of America, much improvement has been witnessed within the few past years; and although excessive rain or drought, the army-worm or caterpillar, blight, mildew, or rust, occasionally disappoints the hopes of the planter, yet a closer study of the habits and diseases of the plant, a careful selection of seed, the introduction of new and improved varieties, and a nicer and more careful cultivation, are all aiding to swell the aggregate of the cotton-fields.

Maize, or Indian corn, ranks next among the products of the State, though what is raised within it, enters to a small extent only in the exchanges of commerce. It is generally consumed on the plantations where it is produced, and its value is absorbed to swell the exports of the two former staples. If viewed, however, as it is, as an article of luxury to the planter and an indispensable article of food for the laborer, the working animals, swine, and poultry, it assumes a vast importance among the leading objects of attention, and much beyond

the measure assigned to it at the current rates in dollars and cents. Besides the large expense of preparing, sacking, and sending to market, there to pay additional sums in freight, drayage, storage, "ratage," and commissions, there is a corresponding expense of purchasing, freight, drayage, etc., in bringing it back to the plantation for consumption. All these several items must first be subtracted, before we can get at the relative value of corn raised on a remote plantation and the one where it is consumed. If we go a step further, and consider its presence or absence in our granaries as involving the question of sustenance or starvation, of life or death (of which we have at the present moment so terrible an example in Europe), we shall hereafter place a higher value on this article than we have hitherto done since the early settlement of the country. What has occurred elsewhere may occur here, and exemption from any particular calamity hitherto, is no guarantee against its presence hereafter. The cultivation of maize on nearly every plantation within this State, to the extent at least of its own consumption, ought to be considered a fundamental principle in its management.

Although not equally adapted to the highest production of corn, as some of the choice lands between the great chain of northern lakes and the south line of Tennessee, yet where well drained and properly treated, the delta of Louisiana everywhere gives a remunerating crop of corn; and the lighter soils of the uplands require but a judicious system of tillage, to make a fair return in this crop for the labor and expense bestowed upon them.

If considered in an economical or domestic point of view, Indian corn, throughout the valley of the Mississippi, is the most profitable crop that can be raised; as one man's labor will produce more human and animal food, than in the cultivation of any other one product. With the best plows, a planting machine, cultivators, and harrows, one person can easily plant, cultivate, and harvest fifteen or twenty acres with four months' labor, that will produce an average of forty bushels per acre, a quantity sufficient to sustain the existence of forty or fifty persons for an entire year. Like the cane, also, it is subject to fewer accidents or maladies than any other crop. Nothing but frost, excessive moisture, poverty of the soil, or negligent management, will prevent a good crop. The first may be always avoided by a late planting; thorough drainage effectually removes injurious moisture; deep plowing and fine pulverization, and especially the use of the subsoil-plow, will mitigate, if it does not wholly obviate, the effects of drought; and rotation of crops and occasional application of green manures, if others are deficient, will be sufficient to prevent exhaustion.

Rice, at one time, formed an important staple of the State, and is now produced in quantities far greater than is generally supposed, yet to an extent much less than the soil, climate, and value of the article will justify. The rice-lands of the Carolinas and Georgia are considered among their most valuable, the best being worth five hundred dollars per acre, while the best cotton-lands will not command more than fifty. Why should they not be of equal value here; the want of skilful management, we fear, must be the only answer. Next to maize, rice

is capable of affording the largest amount of food to man. In localities precisely suited to it, this capacity even much exceeds its rival, and nowhere, it is believed, can it be raised more advantageously than in this State. Immense bodies of the swamps and low-lands throughout the delta, are easily susceptible of being every way fitted for the highest and most profitable production of this grain. Suitable dykes or levées, proper ditches, both for draining and flooding the fields, with the addition of draining-wheels, where their presence is necessary, are all that is essential to secure millions of acres for this object, that are now solely tenanted by every worthless specimen of the amphibious vegetable and animal creation. Rice may also be very advantageously grown upon the uplands, and even the highest pine-soils will yield enough to make it an object of attention. But in such, great care is requisite to prevent exhaustion, which is scarcely possible on the rich alluvial bottoms that can be properly flooded, as the turbid water that over-spreads the fields, comes to the support of the crop, charged with every necessary ingredient of vegetable nutrition.

One reason why rice has not hitherto been made an object of greater attention here, is the want of proper machines for planting and preparing for market. Those of the latest and best construction have been for some time used in the Atlantic States, and may now be had in this city. With these at command, with a soil, climate, and the facilities for irrigation so entirely adapted to the purpose, there is no good reason why rice should not again become one of the most important branches of agricultural attention in Louisiana.

Indigo was the leading product of this State a century since, yet now it is scarcely cultivated. Two millions of acres of the most fertile cotton-lands within the State are every way adapted to its profitable growth. Its culture here was gradually abandoned for the greater profits afforded by other articles, particularly sugar and cotton. The demand for it from the extension of our manufactures, is annually increasing its consumption in this country, and the application of the latest chemical science to its maceration and preparation for market, would undoubtedly render this an object well worthy of attention at the present time.

Tobacco may be raised here of the finest quality and to an unlimited extent. If production be combined with its manufacture, for the supply of this and others markets, few objects would better pay the labor and capital invested than this. The choicest qualities of leaf are produced on this soil, which are scarcely surpassed by the best brands of the Havana.

Madder, woad, weld, saffron, sumach, etc., used primarily for dyes, and already in large demand by the northern manufacturers in this country, can be raised here with decided profit. The first is also a valuable food for cattle; saffron is used medicinally; and the astringent properties of the sumach render it a substitute for the tannin of the oak and hemlock where they do not exist. Roots and almost every species of culinary vegetable can be raised to the full extent of the wants of the inhabitants, and the sweet potato may be grown for exportation with decided profit.

Of fruits, the orange and the fig thrive remarkably within the State, and the former may be exported, and with equal advantage to the planter as any other crop. The peach, the apricot, and nectarine produce largely, and of the finest quality, upon the uplands, when properly treated. The plum and the apple, the olive, the lemon, the lime, etc., may, with proper attention, be reared on such soils and in such localities as are suited to their habits and characteristics. The wild mulberry grows spontaneously in the forests of this State; and the *Morus multicaulis*, and varieties of the Italian, succeed admirably on the drier soils. This ensures success for the silk-worm on the uplands wherever introduced. The equable temperature and condensed nutritive foliage afforded by such localities (and they sweep around a larger portion of the northern part of the State), will undoubtedly produce healthy silk-worms, and as heavy, valuable cocoons as are yielded in any part of the world. Wm. G. Hewes, Esq., formerly from Boston, but for many years a resident of this city, has placed in my possession specimens of his first attempt in the production of the cocoon, which I have nowhere seen surpassed on this continent.

These are a few among the many objects that should arrest the attention of the intelligent and enterprising agriculturist before seeking them further South and West, and still more remote from the seaboard, where, for a coming century at least, he must look for the most profitable market for his products.

The false ambition for large plantations, and operations and achievements beyond the legitimate means of the owner, has been and still continues to be, the bane of citizens of our new States. This policy may result in giving to the few, large landed estates, yet really less pecuniary income, than would result to the shrewd manager where a denser population existed, and more aggregate and active wealth circulated among the mass, the necessary result of a greater and more intense production. In looking over some of the plantations of this region, where large bodies of land are either wholly or partially unsubdued, and the remainder admits of much higher cultivation, one cannot but be forcibly impressed with the consideration, that the old maxim, *divide and conquer*, if applied to southern plantations generally, would have a much more pregnant and salutary bearing on the welfare of the human race, than was ever assigned to it by the ambitious Roman. *A little land well tilled*, while vastly more beneficial to the State and the middle property-classes, is, perhaps, of equal or even greater advantage to the opulent, than the present system of overgrown and half cultivated estates. A division of labor, and a variety in the objects of agricultural pursuits, are equally essential to call into profitable action the various traits of human character, the attainment of the greatest good to the greatest number, and the full development of the vast agricultural resources of this great State.

The foregoing embrace a few hints which may be successfully and almost indefinitely extended by more experienced residents, for the more effectual and profitable augmentation of the present and future products of Louisiana.

R. L. ALLEN.

New Orleans, May, 1847.

WESTERN AGRICULTURE—CORN-COBS.

I MADE a flying visit to our old friend Henry L. Ellsworth, of Patent Office memory, one day last month. He is now a resident of La Fayette, Indiana, where he is farming pretty largely on the Wea Prairie, about seven miles out, on which he has a thousand acres of Indian corn in one field. The uncommon high price of corn this summer, has been the moving cause of growing many an extra acre of it in the Wabash Valley, where, if it ripens well, it will tell a pleasing tale, not only to the cultivators, but to the starving millions of Europe.

Mr. Ellsworth is as full of enthusiasm as ever, and no less busy than he was in his office at Washington. He is an owner and manager of a vast amount of land, which he is selling, leasing, and improving, and which, together with all the business operations that he is carrying on, keeps his office crowded with the multitudes who deal with him. Yet he finds time to be continually trying some experiment, or studying out some improvements for the benefit of the agricultural community.

I saw six pigs in as many pens, just big enough to hold each occupant without exercise, which he was feeding on corn in the ear, corn ground, but fed raw, and corn-meal made into mush—two upon each kind. The pigs were all alike in age, breed, size, and weight, when commenced with, and after being fed a certain time with carefully-weighed quantities of food, they are re-weighed and weights noted, and then those which had been fed upon one kind, are changed to another and so on; and when the experiment is finished, he assured me he would publish the table. The experiment thus far is very largely in favor of the mush, bidding fair to produce enough to pay toll and trouble for grinding, as well as for cooking, and leave a profit. The number of pounds of good thick mush, that one hundred pounds of meal, well-worked, will make, is astonishing to any one who has never thought much upon the subject. It will not fall much if any short of *six hundred pounds*. Mr. Ellsworth's kettle holds just fourteen pounds of meal at a charge, and several accurate weighings give over eighty pounds when well cooked, and I saw myself that no more water was used than the meal would absorb. But it must be cooked—not merely scalded. A little salt is added, and occasionally a little sulphur.

Mr. Ellsworth assured me that he had proved the mooted point of nutritive food in corn-cobs. He says, "*hogs will live and thrive upon well ground cob-meal alone!*" At first they did not take hold. I then added a small quantity of meal of the grain, principally to make the mass ferment quicker, and then they eat the whole, and did well. I had great difficulty in getting the cobs ground. Millers are so well satisfied in their own minds that cobs are good for nothing, that they are not willing to let the experiment be tried whether they are nourishing or not. I am satisfied that twenty-five pounds of corn-meal added to one hundred pounds of cob-meal, is more valuable for feed for growing stock, than seventy-five pounds of corn-meal alone." Such is the language of Mr. Ellsworth. Experiments of this kind should be further tried. One-fourth of the weight of a bushel of ears of corn,

nature never intended should be thrown away, and cobs upon large corn-farms in the West are literally thrown away. They are neither used for food, fuel, feed, nor manure; for the latter is considered a nuisance.

After my visit to Mr. Ellsworth, I met with our old friend, Mr. Colt, of New Jersey, at the great Chicago Convention. Owing to the vast crowd of people and business, I did not have the opportunity that I wished to glean intelligence from so enterprising a Jersey farmer as he is well known to be; but as a matter of course, the things that our minds most did dwell upon were discussed over the dinner table, where I mentioned my conversation with Mr. Ellsworth, upon the subject of corn-cobs, and my belief that they would be highly advantageous to feed in small quantities to all kinds of stock, solely on account of the alkaline properties that many an ancient dame knows that they possess. For oft has she made cob-ley when pearlash was high; and even if a little should be mixed in human food it would not injure it; and in the stomach of fattening hogs particularly, it would prove an excellent corrector of acidity. This idea was nothing new to so inquiring a mind as that of Mr. C., and he told me that he had tendered a donation of one hundred dollars to the American Institute for a complete analysis of corn-cobs, so as to prove whether there was any nutritive quality in them.

But my opinion is, that if the hundred dollars were spent in actual experiments of feeding live stock with cob-meal, a much more satisfactory result might be arrived at, than can possibly be done by any chemical analysis. If Mr. C. himself will undertake the matter, I am sure that he will prove some facts of vast importance to the corn-growers of the United States. Where cobs are to be had in vast quantities, if they were used as fuel and the ashes carefully saved, I have no doubt that they would be found more than twice as valuable as wood-ashes for any purpose. If cobs are not worth feeding to stock, and not of sufficient value as manure or fuel, to be worth saving, then I am greatly mistaken, and hope to have my mind enlightened with the truth; and when that is done I shall not feel so grieved to see this bountiful product of nature lying knee-deep across the public highway in front of the door of many a hog and hommony farmer of the West. But enough about one of nature's productions which the world estimates as good for nothing.

But there is another subject that was talked over by Mr. Ellsworth and myself which I hope to see discussed in your columns, and which will afford your Reviewer an ample text, and which I hope he will discuss with all the candor that his somewhat captious pen will allow him, and not ridicule the idea because it is a new one. It is packing flour and meal, and in fact, all dry substances usually packed in barrels for a foreign market, in *square packages*. A barrel of flour put up in a neatly made smooth chest, would be something new. The advantages in form over that of the old one would be many, as we view the matter. *Firstly*, not one tree in a hundred will make barrel staves, that will make good sound boards. *Secondly*, they can be made cheaper than barrels. The boards can be sawed, planed, and sides and ends dove-tailed together—

bottom and top cut to match in—all by machinery of the simplest forms and rapid in its operation. All but the top should be well nailed, and cut nails are cheaper than hoops. The top should be put on with wood-screws, which can be done with a very simple machine, and much quicker than the most expert workmen could head a barrel; the screws being made of a new form on purpose for this use. It may be found necessary to put a very light iron hoop around the ends when shipped on a long voyage. *Thirdly*, the important advantage saved in stowage, in wagon, railroad-car, canal-boat, on shipboard, or in store. *Fourthly*, not one atom of leakage. Every one who has seen flour carried upon a railroad, is aware that a great many barrels which were made of timber not well seasoned, leak quite an item of the quantity to a starving man. The boxes not admitting leakage, if exposed to rain, would also save an item. *Fifthly*, these boxes in England, where deal-boards are sold by the pound, would always be worth more than cost, when emptied of their contents, either to work up or to be used as they are for household use; for, by adding a pair of butts, there is a good chest or cupboard; or they would always sell to dry goods or shoe-dealers for packing-boxes. Indeed, the lumber is so cheap in many of the grain-growing districts, that it would be found profitable to sell them after being emptied, in our cities. *Sixthly*, the absurd old fashion of selling 196 lbs. of flour in a package, would be done away with, and the boxes would always be of exact sizes, holding 50, 100, 200 lbs. &c., and sold by weight. And *lastly*, what are the objections? Let them be fairly stated and they shall be fairly answered (a). But I am at the end of my sheet and yet not half to the end of my story, but it must be deferred. SOLON ROBINSON.

Crown Point, Indiana, July, 1847.

(a) We do not agree with our correspondent in substituting boxes for barrels. 1. Economy of timber is not yet an object in this country. 2. They cannot be made so cheap as barrels, as these last are extensively made by hand at 25 cents each; and the introduction of the recently-invented barrel and stave-machines will probably materially further lessen the expense. 3. Stowage is no object, as cars, boats, and vessels already stow all the weight they can carry. 4. Leakage with good barrels amounts to nothing, and with poor boxes, would be fully equal to poor barrels. The thin timber used for the former is more quickly and certainly seasoned than the latter. 5. Second-hand barrels are worth as much in proportion to their cost, as second-hand boxes after arriving at their destination. 6. If it is absurd to sell 196 lbs. of flour in a package, it may be altered to packages of 50, 100, or 200 lbs. barrel-shaped, equally as if squared. 7. Boxes of the same capacity and weight as barrels are vastly weaker. 8. The breakage and waste in consequence, and the extra expense of the interminable rolling necessary from the mill to the bakery, would much increase expense of transportation. We can roll two barrels with more facility than one square box.

LIME, improperly or prodigally applied, enriches the father, but impoverishes the son.

HINTS FOR THE SOUTH.

In looking over the pages of the *Agriculturist*, and other journals of the day, I often see articles respecting the improvements of the South. I notice the different improvements in planting, rearing of stock, and agricultural implements; I like them all, and wish these improvements could be brought about; but there it is, when I look around and see so much, speaking of desolation and decay, my heart fails me and I begin to be fearful that the South never will be redeemed from its state of thralldom. If you speak to the planters about raising so much cotton and not turning their attention to other things, or at least divide their labor, they will say, "Oh, well, I know it—I know we are ruining ourselves, but it cannot be helped. We are in debt and must make cotton to work ourselves out."

We have to buy our own meat both for our tables and our negroes. This takes the work of some five or six hands. Then we have corn often to buy, and taxes to pay, which, with us, are extremely onerous; also, negro-clothing, plows, shoes, medical bills, horses, mules, and store accounts to pay, and at the end of the year, if there is no interest or instalment of some bank debt to pay, the remnant of the good old times of 1836-7, why, even then, out of a crop of six or seven thousand dollars, we hardly have enough left to pay our overseer. This is a true picture of the South. To be sure, some of our most enterprising planters (and among them I will name Col. D. J. Fluker, of this parish) are raising a small portion of their meat; but not a tithe of what they use. This is a very important item, and one which would save many thousands to the South if it were otherwise.

I would be obliged to some of your well-informed Southern correspondents if they would give a page or two of advice respecting the rearing, education, and management of hogs, from the time they are ushered into an unfeeling world to that period when they are destined to grace the table of a negro. We can afford to be dependent on the West for our table-meat, but we should raise that on which we feed our negroes, and not be forced to pay from \$15 to \$16 per barrel for pork. There is one difficulty in the way. Our negroes kill off the pigs as fast as they appear. We should also be able to raise our own wheat here. It has been cultivated successfully in Mississippi, and I see no good reason why we cannot *flour* it ourselves.

In regard to negro-clothing, I suppose we must be content to be supplied with Lowells and Linseys from the looms of the North until we have a manufactory of these articles in the South, which is well able to support several. Do you know why cotton-bagging and bale-rope, and twine cannot be made at home, and thus absorb many a bale of cotton which would find its way to the North or to England, the genius of which country will manufacture and re-ship it to us with a thousand per cent. added? I should also like to know what is the best method of taking care of stock which have to depend on what nature provides for them. How disgraceful it is to a planter to see all through the winter his stock, both old and young, standing thin as a shadow, shivering under the lea of some fence corner, and starved, turned out "to root or die" on

a scanty winter-pasture. This is what has killed all the fine Durham and other stock. So it is with mules and horses. Is it not possible to build some kind of a shelter for stock to shield themselves from the cold piercing blasts of winter? It appears to me that the manure which could be collected from the shelter in the spring, would in one year pay for erecting it.

Can anybody tell me also what will make a pear-tree bear which is a scion from a bearing-stock? It blooms well and puts forth leaves in profusion, but in a short time the blossoms all fall off. So it is with my cherry and apple-trees (a).

J. S. PEACOCKE.

Belgrade, E. F. La., July 27th, 1847.

(a) Our correspondent does not state the nature of the soil in which his trees are planted, nor whether they are situated on upland or the Mississippi bottoms. Apples, pears, cherries, peaches, &c., we believe do not well succeed in the latter; but whether this is owing to any deficiency in the composition of the soil or to the heat of the climate, we have no means of knowing. If the trees are located on the upland, we would recommend that a compost, made of charcoal, wood-ashes, shell-lime, and a liberal dressing of stable-manure be added to the roots, and that the trunks of the trees be thoroughly scrubbed with soap-suds. If they are situated in the low lands, perhaps a dressing of potash, shell-lime, and barn-yard manure would have the desired effect.

We hardly think the warmth of climate can be the total cause of the failure; for, during the past summer, according to the Alabama Planter, the Mobile market was abundantly supplied with apples of the growth of the immediate vicinity, which is in about the same latitude as Baton Rouge. "Among these apples, were large greenings, pippins, and russets of the Northern States. The first grew remarkably large. The others, when fully ripe and mellow, are represented to have been of superior flavor and excellence. Coming to maturity so early in the season, when Northern and Western apples are not to be had, they command a handsome price, and pay better, perhaps, than any other product in our market. This settles the question conclusively, which has been so long mooted, that good apples could not be raised in this latitude. Here, the small trees brought from the North, attain in five or six years a large growth, and the russets, greenings, pippins, &c., which in Massachusetts scarcely reach maturity before winter, in this climate ripen on the trees in August and September. The ripening is in succession, the fruit most exposed to the sun and air, first maturing, and are gathered and sold as they ripen. So superior, remarks a Northern writer, are these apples thus ripened, in flavor, size, and excellence, that they can scarcely be identified with the same kinds of northern growth. This rapid maturing is of course followed by a corresponding decay, but in consideration of the early yield, cultivators will not deem it too expensive to supply the places of the failing trees with fresh importations."

A full reply to the inquiries other than fruit-trees will be given in the December and subsequent numbers of this periodical.

List of Premiums

Awarded at the New York State Cattle-Show and Fair at Saratoga, September, 1847.

DURHAM CATTLE.

Bulls over three years old.—1st, Bell & Morris, Westchester county, Marius, \$20; 2d, H. N. Cary, Marcy, Oregon, \$15; 3d, J. B. Packer, Charlton, Tecumseh, Herd Book.

George Vail, for his bull Meteor, received certificate. The committee would mention here as coming in this class the justly celebrated bull, Meteor, belonging to Mr. George Vail, of Troy, which was on the ground for exhibition merely; having taken the first premium at a former show he was excluded from competition at the present. We think he stands unrivalled.

Two year old Bulls.—1st, Z. B. Wakeman, Herkimer county, Young Meteor, \$15; 2d, George Vail, Troy, Buena Vista, \$10.

Yearling Bulls.—1st, E. P. Prentice, Mount Hope, Beppo, \$10; 2d, D. D. Campbell, Schenectady, \$5.

Cows.—1st, George Vail, Hilpa, \$20; 2d, E. P. Prentice, Charlotte, \$15.

Two year old Heifers.—1st, Z. B. Wakeman, Sylvia, \$15.

Yearling Heifers.—1st, Geo. Ohlen, Schenectady, Lilly, \$10; 2d, D. D. Campbell, \$5; 3d, Jane T. Gould, Troy, Jenny, Herd Book.

In addition to the cash prices mentioned, each of the above persons received a copy of the American Herd-Book.

Bull Calves.—1st, Z. B. Wakeman, Kirkleavington \$5; 2d, George Vail, Major, Washington's Letters.

Heifer Calves.—1st, Geo. Vail, Willy 4th, \$5; 2d, Geo. Vail, Willy 3d, Washington's Letters.

HEREFORDS.

Bulls three years old.—Geo. Clark, Otsego co., Major, \$20.

two Edward Wells, Fulton co., Fulton, \$15

Cows.—Edward Wells, Adelaide, \$20.

DEVONS.

Bulls three year old.—Nelson Washburn, Butternuts, Otsego county, Baltimore, \$20.

Bulls one and two years old.—1st, S. A. Law, Meredith, Delaware county, Rover, \$15; 2d, Nelson Washburn, \$10.

Bull Calves.—1st, Nelson Washburn, \$5; 2d, Nelson Washburn, Washington's Letters.

Cows.—1st, Nelson Washburn, Connecticut, \$20; 2d, same, Baltimore, \$15.

Heifer Calves.—1st and 2d, Nelson Washburn, for his heifer calves, \$5 and Washington's Letters.

AYRSHIRES.

Yearling Bulls.—E. P. Prentice, Mount Hope, Dundee, \$15.

Cows.—1st, C. N. Bement, Albany, Fairy, 5 years, \$20; 2d, E. P. Prentice, Ayr, 9 years, \$15.

Two year old Heifers.—1st, E. P. Prentice, Mida 1st, \$15; 2d, C. N. Bement, Maggie, \$10.

Bull Calf.—C. N. Bement, Rhoderick Dhu, \$5.

Heifer Calf.—E. P. Prentice, Mida 2d, \$5.

CROSS AND NATIVE.

Three year old Cows.—1st, John Lee, Cambridge, Washington county, \$20; 2d, N. Washburn, \$15; 3d, Phineas Fletcher, Saratoga Springs, \$10.

Two year old Heifers.—1st, C. N. Bement, \$15; 2d, N. Washburn, \$10; 3d, David Gillet, Butternuts, Otsego county, \$5.

Yearling Heifers.—1st, John Lee, Cambridge, Washington county, \$10; 2d, C. N. Bement, \$5; 3d, Joshua Bliven, Saratoga Springs, Fanny, Vol. Transactions.

Heifer Calves.—1st, John Lee, \$5; 2d, H. H. Lawrence, Saratoga Springs, Washington's Letters.

Bulls.—1st, Mynard Devoe, Saratoga Springs, Col. Tour; 2d, Joseph Wood, Greenfield, Washington's Letters; 3d, Daniel Beers, Ballston, Transactions.

Best yoke of Working Oxen.—1st, Elon Sheldon, Sennet, Cayuga county, aged 4 and 5 years, \$15; 2d, Pliny Gould, East Nassau, Rensselaer county, 4 years old, \$10; 3d, John Lee, pair twins, 5 years old, Transactions.

Three year old Steers.—1st, Elon Sheldon, \$10; 2d, David Gillett, \$8; 3d, James S. Wadsworth, Genesee, Livingston county, Transactions.

Best ten yoke Steers.—James S. Wadsworth, \$15.

Best two year old Steers.—1st, Elon Sheldon, \$10; 2d, Lewis E. Smith, Halfmoon, Saratoga county, \$5; 3d, H. N. Cary, Marcy, Oneida county, Transactions.

Yearling Steers.—1st, A. Gilbert, Hamilton, Madison county, \$8; 2d, James P. Noxon, Stillwater, Saratoga county, \$5.

Boys training pair three year old.—J. N. Adams, Butternuts, Colman's Tour.

Training pair Yearling Steers.—A. S. Gilbert, Colman's Tour.

Milk Cows.—1st, Ambrose Stevens, New York, Durham cow, Grace, 6 years old, Diploma; 2d, E. P. Prentice, Durham cow, Esterville, 5 years, Herd Book; 3d, H. N. Cary, Durham

heifer, Rose, 3 years, Transactions; 4th, John Lee, native cow, Trans.; 5th, H. H. Lawrence, Trans.; 6th, Wm. Wolford, Albany, Red Daisy, Trans.

FAT CATTLE.

1st, Warren Halsey, Trumansburgh, Tompkins county, \$15; 2d, Edward Munson, Sennet, Cayuga county, \$10; 3d, John B. Holmes, Saratoga, Colman's Tour.

FAT SHEEP.

1st, Z. B. Wakeman, Herkimer, \$10; 2d, J. McD. McIntyre, Albany, Colman's Tour; 3d, L. J. Van Alstyne, Canajoharie, Trans.

HORSES.—All Work.

Stallions.—1st, Joseph Milliman, Greenwich, Washington county, Chief Justice, \$15; 2d, Simeon Christie, Mayfield, Fulton county, Young Dread, \$10; 3d, Daniel A. Cornell, Pittstown, Rensselaer county, Peacock Diamond, Youatt on the Horse; 4th, Lorenzo M. Lown, Sandlake, Rockingham, Vol. Trans.

Mares.—1st, J. B. Burnett, Syracuse, \$15; 2d, Joseph Daniels, Greenfield, \$10; 3d, Henry W. Dennis, Saratoga, Youatt; 4th, Mynard Devoe, Saratoga Springs, Trans.

Draught Horses.—1st, William Larman, Pittstown, Rensselaer co., French Emperor, \$15.

Blood Horses.—1st, Ed. Long, Cambridge, Tornado, \$15; 2d, Elias Ireland, Alexander, \$10; 3d, Abram Butler, Wayne co., Young Mogadore, Youatt.

Three year old.—1st, Simon Schermerhorn, Rotterdam, Waxy, \$10; 2d, Samuel R. Garrett, Ballston, Highlander, \$5; 3d, Henry Bailey, Bethlehem, Sampson, Youatt; 4th, Daniel Davis, Guilderland, Rough and Ready, Trans.

Three year old Mares.—Harman Becker, Easton, Lady Jane, \$10.

Two year old.—Hiram Hall, Grafton, Empire, \$8.

Ponies.—Four imported ponies, very finely trained, were exhibited by the sons of E. P. Prentice, Mount Hope, and J. H. Prentice, New York. They were exercised by the lads with great skill and judgment, and the committee recommend a Diploma to each.

GELDINGS AND MATCHED HORSES.

Geldings.—1st, Arden Merrill, Rome, grey gelding, Diploma; 2d, Peter M. Moriarty, Saratoga Springs, grey, 6 years, Youatt.

Matched Horses.—1st, Herod Otis, Jordan, Onondaga co., bays, 7 years, \$8 and Diploma; 2d, Aaron Freeman, Milton, Saratoga co., browns, 5 and 6 years old, \$5; Caleb Gasper, Onondaga co., dark grey, 4 years old, Vol. Trans.; N. W. Moore, Sauquoit, Oneida, black, 5 years old, Trans.; Lewis G. Morris, Morrisiana, Westchester co., bays, 5 and 6, Trans.; D. R. McCarthy, New Baltimore, greys, 6 years old, Trans.; Lester Hungerford, Watertown, Jefferson co., brown, 4 years old, Trans.; Henry Vail, Troy, sorrels, 7 years old, Eclipse horses, Trans.

SHEEP—LONG WOOLLED.

Best Buck.—1st, L. J. Van Alstyne, Canajoharie, \$10; 2d, E. J. Ireland, Watervliet, \$5.

Best 5 Ewes.—1st, Wm. Rathbone, jr., Springfield, \$10.

MIDDLE WOOLLED.

Bucks.—Z. B. Wakeman, Herkimer, \$10; 2d, J. McD. McIntyre, \$5; 3d, Z. B. Wakeman, American Shepherd.

Best Ewes.—1st, Z. B. Wakeman, \$10; 2d, do., \$5; 3d, J. McD. McIntyre, American Shepherd.

Best 5 Lambs.—1st, Z. B. Wakeman, \$5.

MERINOS AND THEIR GRADES.

Best Bucks.—1st, Joseph Blakeslee, Salem Centre, Westchester co., \$10; 2d, John B. Holmes, Saratoga, \$5; 3d, Daniel S. Curtis, Canaan, Columbia co., American Shepherd.

Best Ewes.—1st, Joseph Blakeslee, \$10; 2d, D. S. Curtis, \$5.

SAXONS AND THEIR GRADES.

Best Bucks.—1st, Joseph Haswell, Hoosick, Rensselaer co., \$5; 2d, W. Joslyn, Buskirk's Bridge, Rensselaer co., \$5; 3d, Hiram Whitlock, North Salem, Westchester co., American Shepherd.

Best Ewes.—2d, Wm. Joslyn, \$5; 2d, J. L. Randall and Sylvester Milliman, Clay, Onondaga co., \$5; 3d, Joseph Haswell, Am. Shep.

SWINE.

Large Breed.—Best boar, 2 years old, Henry Holmes, Saratoga, \$10; best 1 year old boar, Berkshire, Jonathan Pitney, Saratoga Springs, \$8; best boar, 6 months and over, Jonathan Pitney, \$5.

Best sow, 2 years old, Z. B. Wakeman, Herkimer, \$10; best sow, 1 year old, Berkshire, James Stewart, Saratoga Springs, \$8.

Small Breed.—Best sow, 2 years old, James Stewart, \$10; best sow, 1 year old, Jonathan Pitney, \$8; best lot of pigs, Jonathan Pitney, \$5; second best, Nathaniel Mann, Milton, Saratoga co., Trans.

POULTRY.

Best lot of Dorking fowls, H. Vail, Troy, \$2 and American Poulterer; best lot of large fowls, J. T. Blanchard, Saratoga Springs, \$2 and do.; best pair of ducks, \$2 and do.; lot of Poland fowls, \$2 and do.; best and greatest variety of barnyard fowls, J. A. Brackett, \$5 and do.

FOREIGN STOCK.

Horses—Best Stallions.—1st, D. & N. Hill, Bridgeport, Vt., Black Hawk, \$15; 2d, Silas Hale, Royalton, Mass., Green Mountain Morgan, \$10; 3d, Spencer C. Smith, Bloomsbury, N. J., Top-Gallant jr., Youatt.

Brood Mares.—1st, E. H. Morgan, Rutland, Vt., \$15; 2d, Calvin Blodgett, Lady Burbank, \$10; 3d, F. A. Wier, Walpole, Lady Wildair, Youatt.

Cattle.—A. H. Jerome, New Hartford, Conn., best yoke working oxen, Diploma.

Sheep—Cotswold.—C. W. Reybold, Delaware, Diploma. **Saxons.**—S. C. Scoville, Salisbury, Conn., Diploma. **Merinos.**—Joseph Hinds, Brandon, Vt., Diploma; J. N. Sawyer, Salisbury, N. H., 5 bucks and 5 ewes, Diploma; Jacob N. Blakesly, Conn., 1 buck, Diploma.

PLOWS.

Minor Horton & Co., Peekskill, Peekskill Plow, \$10 and Diploma.

FARM IMPLEMENTS, WAGONS, HARROWS, &C.

1st, Silas Briggs, Ballston, lumber wagon, \$10 and Diploma; 2d, Hollister, with 3 pair steel springs, Col. Tour.; 3d, John W. Sherman, market and spring wagon, new and ingenious construction, Trans.

Harrows.—Z. B. Wakeman, Herkimer, \$3.

Cultivators and Scarifiers.—Anthony Van Bergen, Coxsackie, \$3.

Fanning Mill.—1st, I. T. Grant, improvement on former mill exhibited, Silver Medal; 2d, J. E. Clapper, Trans.

Horse Power.—M. S. V. D. Cook, Pittstown, \$5 and Diploma; 2d, A. & W. C. Wheeler, Chatham 4 corners, Trans.

Stalk and Straw Cutter.—1st, Geo. Catchpole, \$5 and Diploma; 2d, Byron Densmore, Trans.

Drill Barrows and Seed Planter.—H. L. Emery, Albany, \$3; Pennock's Seed and Grain Planter, certificate; C. Masten, Patent Lever Drill and Grain and Seed Planter, Diploma and Trans.

Portable Grain Mills.—Charles Ross, Fitzgerald's Burrstone, Trans.

Smut Machine.—Leonard Smith, Troy, Trans.

Broadcast Sowing Machine.—Peter Gleason, Trans.

Corn Sheller and Separator.—Luther Tucker, Trans.

Root Cutter.—Luther Tucker, Ruggles, Nourse & Mason's vegetable root cutter, Trans.

Hay Fork.—L. Bacheller & Son, a very highly finished hay fork, Trans.

Mowing Machine.—F. Ketchum, Buffalo, Diploma.

Reaping Machine.—T. R. Hussey, Diploma.

Field Cultivator.—1st, Doras Hinkston, South Barre, Orleans co., Diploma; 2d, Nathan Ide, Shelby, do., Trans.; 3d, Alanson T. Odell, Royalton, Niagara co., Trans.

Seed Sower and Weeder.—Exhibited by Noadiah Moore, Chazy, N. Y., Diploma.

Corn and Cob Crushers.—Butterfield & Greenman, Utica, \$5 and Diploma.

Flax and Hemp Dresser.—James Anderson, Louisville, Ky., \$5 and Diploma.

Ox Cart.—G. B. Powell, Saratoga, \$5.

Horse Rake.—Henry Warren, Troy, \$5 and Diploma.

Ox Yoke.—1st, Azor Monroe, Galway, Saratoga co., Diploma; 2d, Elon Sheldon, Sennett, Cayuga co., Trans.

Saddle.—Lyman J. Lloyd, Albany, Diploma.

Grain Cradles.—Myers & Bryan, Schaghticoke, Diploma; I. T. Grant & Co., do., Diploma.

Six Manure Forks.—Luther Tucker (Partridge's), Diploma.

Six Hand Rakes.—Luther Tucker, Mayher & Co., New York, Diploma.

Grass Scythes.—Hiram C. White, Albion, Orleans co., made by R. B. Dunn, Wayne co., Maine, Diploma; six cradle scythes, Knickerbocker & Hurlbut, Saratoga Springs, Diploma.

Churn.—Nathan Parish, Rush, Monroe co., Diploma.

Portable Grain Mill and Bolter.—Charles Ross & Co., Broadway, N. Y., Diploma; D. C. Duncomb, Rochester, Bradfield's patent bolter, Diploma.

Corn Cutter.—Seth Whalen, West Milton, Saratoga co., Diploma.

Dog Power and Churn.—Allen Burdick, Moreau, Saratoga co., Diploma.

Two Hay Forks.—Deming & Hart, Farmington, Conn., of excellent workmanship and finish, Diploma.

Butter Firkins.—John Holbert, Chemung, Diploma; Wm. Trap, jr., Ithaca, Diploma.

Cheese Press.—T. Burch & Co., Little Falls (Kendall's patent), certificate.

Best collection of Agricultural Implements.—Luther Tucker, \$10 and Diploma.

FLOWING MATCH.

1st, Flavel Shattuck, Galway, \$15; 2d, John Smylie, West Galway, \$12; 3d, James McDougall, Argyle, Washington co., \$10; 4th, Howard Delano, Mottville, Col. Tour.; 5th, John Newland, Milton, Saratoga co., Trans.; G. W. J. Bronson, Amsterdam (special), Col. Tour.

Boy 18 years old.—George Wesley Steves, Milton, Saratoga co., \$10.

DAIRIES.

Butter.—O. C. Crocker, Union, Broome co., for best lot in 30 days, 242 lbs. from 5 cows, from 13th June, \$25; E. R. Evans, Marcy, Oneida co., for 2d best lot in 30 days, 216 lbs., from 11th August, \$15; John Holbert, Chemung, for best 25 lbs. made in June, \$10; O. C. Crocker, Union, 2d best, Col. Tour.; Hamilton Morrison, Montgomery, Orange co., 3d best, Vol. Trans.; B. A. Hall, New Lebanon, for best 50 lbs., made at any time, \$15; O. C. Crocker, for 2d best, \$10; Stephen C. Hayes, Galway, Saratoga co., 3d best, Col. Tour.; John Holbert, Chemung, 4th best, Silver Medal.

Cheese.—William Keese, Ausable, Clinton co., for best 100 lbs., 1 year old and over, \$15; T. Burch, Little Falls, Herkimer co., 2d best, \$10; T. Burch, for best 100 lbs. less than 1 year old, \$15; William Keese, 2d best, \$10; Henry Lincoln, Greenfield, Saratoga co., Silver Medal; Newberry Bronson, Wyoming, 4th best, Washington's Letters; Wm. Angles, Cobleskill, 5th best, Vol. Trans.

SUGAR.

H. Davenport, Copenhagen, for best 25 lbs. maple sugar, \$10.

SILK.

Mrs. Lewis Westcott, Greenfield, Saratoga co., for best cocoons and silk sewings, \$10; Mrs. S. J. Pierce, Burlington, Vt., for two white handkerchiefs and black long shawl, Diploma and Downing.

FLOWERS.

Professional List.—Greatest variety, James Wilson, of Albany, \$5; greatest variety dahlias, James Wilson, \$5; best 24 dahlias, James Wilson, \$3; greatest variety of roses, James Wilson, \$5; best 24 blooms, Thomas Ingram, \$3; greatest variety of verbenas, James Wilson, \$3; best 12 varieties of verbenas, Thomas Ingram, \$2; greatest variety German asters, Wm. Newcomb, \$3; greatest variety pansies, James Wilson, \$3; best 24 blooms, Thomas Ingram, \$2.

Amateur List.—Greatest variety, Mrs. Washington Putnam, Silver Medal; greatest variety dahlias, Wm. Newcomb, Silver Medal; best 12 blooms, Miss E. Clarke, Saratoga Springs, Horticulturist; greatest variety roses, Miss E. C. Delavan, Ballston, Silver Medal; best 7 phloxes, Dr. Herman Wendell, Albany, Horticulturist; best seedling phloxes, Dr. Herman Wendell, Wash. Letters; best 12 verbenas, Dr. Herman Wendell, Horticulturist; best 12 Seedlings, Dr. Herman Wendell, Horticulturist; greatest variety German asters, Mrs. Newcomb, Horticulturist; greatest variety pansies, Mrs. Truman Mabbitt, Halfmoon, Horticulturist.

General List.—Best collection greenhouse plants, Mrs. J. Ford, Sar. Springs, Silver Medal; best floral design, J. Dingwall, Albany, Silver Medal; best ornament, Mrs. T. Mabbett, Silver Medal; 2d best, James Wilson, Albany, Col. Tour.; 3d best, Mathias Tillman (gardener to Dr. Wendell), Horticulturist; best flat hand bouquet, James Wilson, Albany; Horticulturist; 2d best, T. Ingram, Sar. Springs, Wash. Letters; 3d best, Miss Sarah M. Davison, Sar. Springs, Downing; best round bouquet, James Wilson, Albany, Horticulturist; 2d best, T. Ingram, Sar. Springs, Downing; 3d best, Mrs. Dr. J. Clarke, Sar. Springs, Downing.

FRUIT.

Apples.—E. C. Frost, Catherine, Chemung co., for Dowse apple for cooking and winter use, worthy of further attention; Holland pippin variety of fall apples; Riley apple, of the fall pippin variety, worthy of note—requested for future exhibition, Diploma; Wilson, Thorburn & Teller, 18 varieties (9 approved); Truman Mabbett, 4 varieties early apples; Early Harvest, Yellow Bough, Strawberry, Downing; H. N. Langworthy, per J. Alleyn, 4 varieties; Henry Vail, Troy, 27 varieties, 23 approved; 2d premium, \$5 and Downing; J. W. P. Allen, Oswego, 5 varieties, all approved, Downing; J. L. Randall, Lysander, 31 varieties, 19 approved, Downing.

Pears.—1st, C. Reagles & Son, Schenectady, largest and best variety, Downing, colored plates; 2d, Dr. H. Wendell, \$5 and Downing; 3d, Wilson, Thorburn & Teller, Trans.; best collection autumn pears, J. W. P. Allen, Oswego, \$5 and Downing; J. W. P. Allen exhibited a remarkably fine specimen of a limb of Oswego Beurre, loaded with fruit, styled by the committee, Seedling, No. 1, commended to special notice, and to which they award a Diploma; Prof. Ives, New Haven, Conn., presented a small seedling early autumn pear of high flavor, Downing; L. Prevost, Astoria Nursery, for a splendid specimen of Duchess d'Angoulême, grown on quince stock, Diploma; Isaac Rapelje, Astoria, presented fine specimens of the Rapelje Seedling, a new pear, which on the sea coast may prove a substitute for the White Doyenné, Downing; H. N.

Langworthy, by J. Alleyn, of Rochester, fine specimens of Onondaga pears, Diploma.

Peaches.—Best 12, A. Snyder, Kinderhook, \$2 and Downing; 2d 12, Enoch H. Rosekrans, Glen Falls, Downing; best Seedling variety, Oliver Phelps, Canandaigua, large yellow cling, \$3 and Downing; James Mills, Poughkeepsie, beautiful specimen pine apple cling, extraordinary size and flavor, Diploma; Prof. A. H. Stevens, N. Y., presented several large and beautiful specimens of the N. Y. white cling-stone, grown in his garden at Astoria, Downing; Jerry Wariner, Springfield, Mass., fine specimen Seedling peaches, from a tree 3 years old, by J. Stafford, Diploma; E. P. Prentice, Mount Hope, 12 fine specimens of Bergen's yellow, Diploma; H. N. Langworthy, by J. Alleyn, Rochester, fine specimens of Royal Kensington and yellow melacoton, Diploma.

Plums.—Best Collection.—1st, S. C. Groot, Schenectady, 25 varieties, \$5 and Downing; 2d, H. Wendell, Albany, 20 varieties, \$5 and Downing.

Best six varieties.—1st, S. C. Groot, \$3 and Thomas' Fruit Cult.; 2d, Dr. Wendell, \$1 and Thomas' Fruit Cult.; Abel Whipple, Lansingburg, for best Seedling, known as Locofoco, \$5 and Downing; S. C. Groot, for best 12 plums, \$1 and Thomas' Fruit Cult.

Nectarines and Apricots.—Best and greatest variety.—1st, H. Snyder, Kinderhook, \$3 and Downing; 2d, Dr. Wendell, \$2 and Thomas' Fruit Cult.; Col. Young, of Ballston, presented some specimens of nectarines produced from the peach-stone.

Quinces.—1st, Dr. R. T. Underhill, Croton Point, \$3 and Downing; 2d., Robert McDonnell, Greenfield, Saratoga co., \$2 and Downing.

Grapes.—1st, best and most extensive collection of native, Daniel Ayres, Amsterdam, \$5 and Downing; 2d, J. C. Hubbell, Chazy, Clinton co., \$2 and Downing; 1st, best dish of native, R. T. Underhill, Croton Point, Thomas' Fruit Cult. and Diploma; 2d, Wm. C. Sage, foreign and native, Downing; Col. Thomas H. Perkins, of Boston, sent a box containing bunches of eight varieties of foreign grapes, extraordinary fine specimens, grown under glass in his garden at Brighton—sorts Nice, two varieties, St. Peter's, Black Hamburg, White Frontignac, West St. Peter's, Grizzly Frontignac, White Muscat, Muscat of Alexandria; also some beautiful Nectarines of remarkable flavor and growth, produced under glass, Boston, Red Roman, and Norrington, Diploma and a letter of thanks.

Special commendation to Mrs. Voorhees, of Amsterdam, for a bottle of choice gooseberry wine, of her own manufacture.

To John H. Waring, for best peck cranberries (superior specimen), \$5.

VEGETABLES.

To N. H. Waterbury, Sar. Springs, for 12 best ears seed corn, \$1; 1st, best $\frac{1}{2}$ peck table potatoes, C. R. Nichols, Darien, Genesee co., \$1; 2d, H. Morrison, Montgomery, Orange co., \$1; greatest and best variety of Seedling potatoes, Rev. N. S. Smith, Buffalo (30 varieties), \$10; Thomas Cody, Saratoga Springs, for 3 best heads of cabbage, \$1; N. H. Waterbury, for best 12 carrots, \$1; N. H. Waterbury, for best 3 squashes, \$1; Truman Mabbett, for best 12 tomatoes, \$1; Thomas Cody, for best 3 egg plants, \$1; C. Schuyler, Ballston Spa, 2d best 12 ears seed corn, Trans.; C. Schuyler, for 12 best onions, \$1; A. J. Parker, Sar. Springs, for Lima beans, \$1.

TWENTIETH ANNUAL SHOW AND FAIR OF THE AMERICAN INSTITUTE.

THIS show commenced on the 5th of October and continued till the 23d. It was held at the commodious premises of Castle Garden; and the long spacious bridge leading to it from the Battery, which had been inclosed and roofed for this purpose, was also densely packed with agricultural and other implements. The interest in this institution seemed to be as great as it was possible for the premises to accommodate. Every nook and corner of the large area were filled with the various products of American art and industry, and it makes us proud of our country—prouder far than to hear the thunders from our distant victories on a foreign soil—to see these manifold specimens of American ingenuity thus fostered and brought into favorable and wide-spread notice, by the leading association of the country. At the same time that the products of various useful arts have been so widely exhibited, the interest of the public to witness this display has suffered no abatement from former years. The crowd of visitors was larger than at any previous period, and the garden has been thronged from the commencement, increasing every day till the end of the fair.

Among the many valuable agricultural articles exhibited, we may mention Lewis' corn-sheller, with separator and fan attached, price \$15; Bott's straw and stalk-cutter, improved, price \$25 to \$30; Tower's ditto; Ruggles, Nourse and Mason's ditto; Thorn's ditto, an excellent machine; Grant's fan-mill, an old machine, but still at the head of improvement; Eddy's Thresher, a new article; Bogardus' horse-power, ditto; Trimble's horse-power; Bogardus & Swift's corn-mills; Fitzgerald's corn and flour mills; Smith's ventilating smut-machine; Gifford's corn-sheller and separator; Ketchum's mowing-machines; Stafford's kiln-drying machines for grain and meal, heated by steam, a new, and apparently an excellent article; Wakeman's harrow, a new and valuable article; Hopkins' manure and hay forks and potato-hooks, highly finished, and cut out of the best solid cast-steel; Bullock's hay-press; specimens of wire and fancy iron fences, a beautiful and convenient article, together with the usual quantity of fine improved plows, harrows, cultivators, &c., &c. Also, several improved washing-machines; a valuable little self-acting apple-parer; dog-powers for churns; Kendall's churns. All of the above implements we have for sale at our agricultural warehouse, 187 Water street.

The articles of various miscellaneous domestic manufacture were displayed in great profusion, and of high finish; and we were glad to notice an unusual advance in many of the finer branches of cutlery, and the metals, wood, leather, wool, cotton, india rubber, &c., &c.

A new and splendid telescope, the fruit of American manufacture, was exhibited.

The show of fruits, vegetables, and flowers was good, and added much to the interest; and the display of fireworks gave brilliancy to the fair.

The annual speech delivered at the Tabernacle by Fletcher Webster, Esq., was replete with interest and instruction, and other addresses made during the Fair added to the interest of the occasion.

The cattle-show was held at the corner of Broadway and Twenty third streets, and was well filled with the various representations of the farm-yard. Preeminent among them was the superb imported horse, Trustee, the illustrious sire of Fashion, who has made the quickest four-mile heat yet run in America. Though now about 17 years old, he seems in tip-top vigor and health. The show of horses was not numerous, but among them we noticed several good animals. The same is true of cattle, sheep, and swine. Among the latter, we noticed the valuable animals of Mr. Stickney, of Massachusetts, and the descendants of former importations, which did great credit to their owner.

There was a pair of sheep-dogs exhibited by Dr. Field, which were fine specimens of what ought to be in the hands of every shepherd.

HOW TO MAKE A STORM-GLASS.—Take a glass-tube closed at one end, with a fine aperture in a brass-cap at the other end. Fill the tube with a mixture of camphor, saltpetre (nitrate of potash), spirits, or other matters, dissolvable by heat, and crystals will be formed, which will generally fall to the bottom and become feathery at the time of an approaching storm, but will rise again when the weather is fine.

SHEEP-BARNS AND SHELTERS.

THE utility of barns for the protection of fodder no one will question; and that a well-constructed barn is conducive to economy, is susceptible of demonstration. Hay is often essentially damaged when stacking, by a sudden and violent rain; whereas, whatever is secured in a barn is freed thereafter from harm. Again, a skilful stacker is rare, and therefore much hay is subjected to damage from this cause; and when unthatched, of course much is injured on the surface. Taking only these into view, the inducement is ample for every sheep-farmer to build commodious barns for the reception of his provender. That they will reimburse their expense in a few years by the saving of hay, and that the flock can be sustained in better order from the improved quality of the hay, all who have had the opportunity to judge, will at once testify.

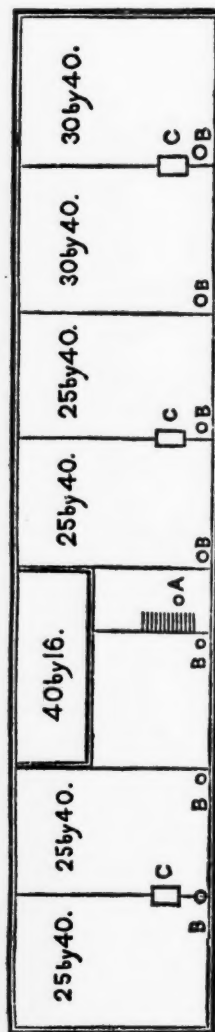
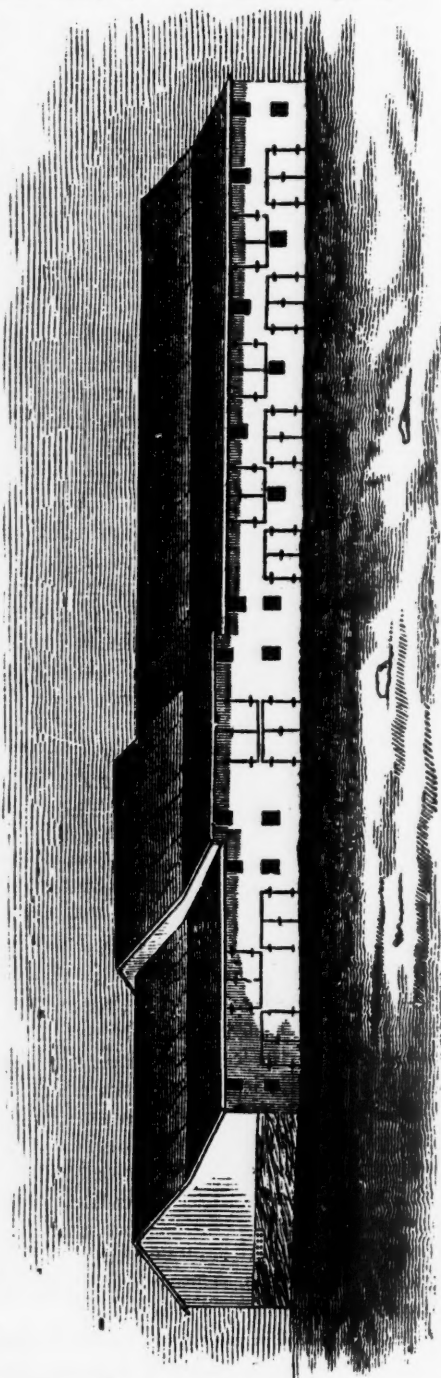
The locality of the writer being favorable with regard to climate, and the snow rarely of much depth, he gives the preference to single barns, which are situated on the borders of his meadows, and therefore very convenient for the reception of hay. These barns are 32 by 24 feet, with 16 feet posts. The sheds are placed at the east end of the barns, and front the south. The latter, however, is objectionable; they should be on the west side, and front the east. By this plan the barn affords ample protection from the cutting winds of the north while the flock is feeding. The writer would recommend, in reference to the sheds, the north gable ends to be placed in a line with the south sides of the barns, with single roofs, the peaks of which may ascend to the eaves of the barns, and the lower ends elevated ten feet from the ground. The space for the sheep to occupy should be six feet in height, with a view to easy removal of the manure by carts; and above, there will be abundance of room for the stowage of straw and pea-vines, for the variations of fodder, and for the deposit of litterings. For 100 sheep the shed should be 20 by 30 feet at least. By this plan, it will be seen that the feeding racks must be placed in the yards.

To those whose circumstances forbid the expense of the erection of barns and framed sheds, the writer would recommend the following:—For the consumption of 100 sheep, during the foddering season, two large stacks of hay are necessary; let these be placed in a north-east and south-west line; and when they are about to be built, place two poles 35 feet each in length on the top of the stack-pens, the centre of the poles to be supported by strong crotches. Before winter the hovel may be completed by putting rails crosswise of the poles to support the straw necessary for the roof; the back can be made of common boards, or by placing rails or poles parallel, and about one

foot apart, and stuffed with old or partly rotted straw. This description of hovels are warm, and made in a very brief time. Wind-breakers may be built at right angles of the hovels, of the same materials and manner as the back of the hovel, which afford much protection when the sheep are feeding:

Description of Fig. 186, by M. Y. Tilden, of New Lebanon, Columbia County, N. Y.

A. Well with pump.



SHEEP-BARN.—FIG. 186.

B. Water-tubs.

C. Boxes for hay 4 by 6 ft. directly under a trap-door, through which hay is thrown from the mow; this prevents the sheep running into it before feeding and also keeps the dust and seed out of the wool.

D. In this section is a shearing floor, 13 by 40 ft., and wool room 14 by 18 ft., plastered.

Racks are placed around the sides of each apartment.—*Morrell's American Shepherd.*

CHOICE VARIETIES OF APPLES.

THE BALDWIN APPLE.—This justly esteemed fruit originated in Wilmington, near Boston, in that part which now makes a portion of the new town of Sommerville, in the county of Middlesex. The original tree grew on the farm of a Mr. Butters, and was known for the time as the Butters apple. This tree was frequented and pecked by the woodpecker, and Mr. Butters called it the "Woodpecker apple," which was soon abbreviated to the "Pecker apple."

My trees, which I set out twenty-eight years since, are registered "Peckers." This fruit must have been known about a century. Orchards were propagated from Mr. Butters' tree pretty freely, about

seventy-five years since, by Dr. Jabez Brown, of Wilmington, and Col. Baldwin, of Woburn, and their sons, to whom the public are principally indebted for bringing the fruit so generally into notice. From Col. B. and his family, who introduced it largely into public notice, it took the name of "Baldwin," by which the fruit is now everywhere known.

I am informed that Major Samuel Jacques, of Sommerville, eminent as an agriculturist, breeder, and horticulturist, as well as a public benefactor of his age, now owns that part of the farm on which the original Baldwin tree grew, and has placed a monument on the site where it once flourished.

It has been thought by some, that there were three varieties of the Baldwin, as some fruited annually, some every odd numerical year, and some on the even years, which (as this, 1846) is the general fruiting year. But on a careful investigation, they are found to be identical.

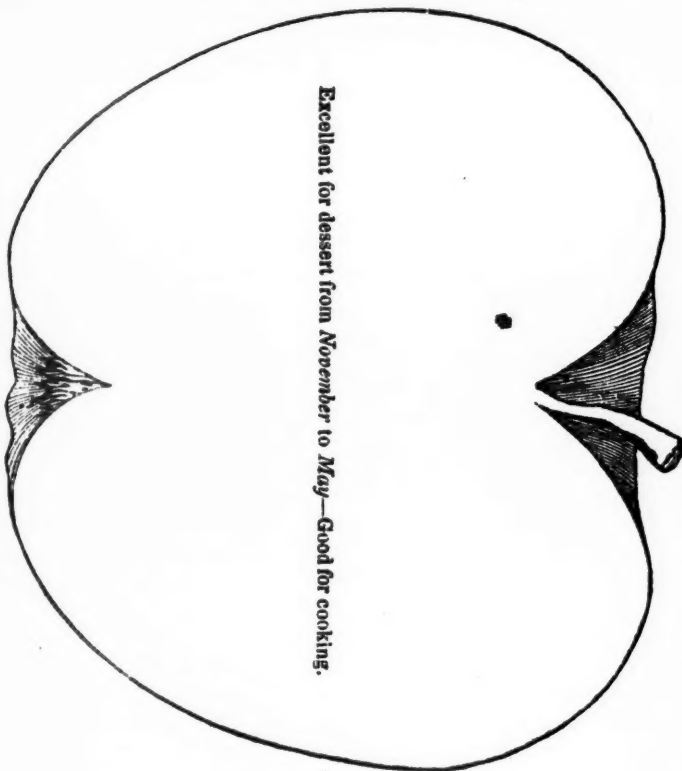
The tree with us, for thriftiness, for fine form and vigorous strength—for its abundant bearing and the beauty and long keeping of its fruit, is placed at the head of all other New England winter apples. The fruit is always fair, above medium size, of a fine rich and yellow color. The flesh nearly tender; in color, yellowish, rich—juicy and fine flavored; excellent for the table or cooking, and is in use from November till May.

I have given the Baldwin a thorough trial in my own orchard. This year is the bearing year with me, and I have taken *ninety barrels* of Baldwins from trees planted twenty-eight years ago in grass-land, and kept in that state ever since.

You may judge how superior to the Newtown pippin this apple is for New England orchard-culture, when I inform you that from four yellow Newtown pippin trees, in the same orchard, planted at the same time with the Baldwins, I gathered only one and a half barrels of apples; while from two Baldwins adjoining, in the same row, I took seven barrels.

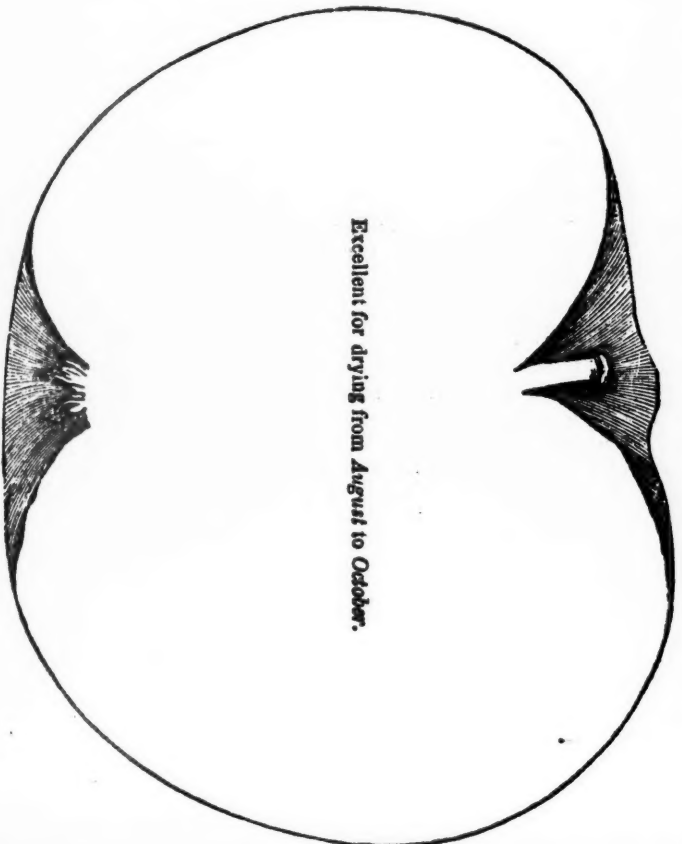
The Baldwin is preferred in Boston, to any other variety for shipping. I have been credibly informed, that one person engaged in shipping fruit from this port, has this autumn purchased twelve hundred barrels of Baldwins for this purpose.—*Horticulturist.* B. V. FRENCH

THE BALDWIN APPLE.—FIG. 87.



Excellent for dessert from November to May—Good for cooking.

MAIDEN'S BLUSH.—FIG. 88.



Excellent for drying from August to October.

The outline of the Baldwin is round, flattened at the stem-end, and narrowing towards the eye. The ground-color is yellow, obscured by red and crimson, slightly marked by russet near the stem, which is rather deeply planted.

MAIDEN'S BLUSH.—This apple is described by Landreth, as above medium-size, smooth skin, yellow, with a lively carmine cheek, and of an outline generally flattened. The flesh is white, tender, and admirably adapted to drying. The stem, which is short, and the eye, are both seated in a deep cavity. The habit of the tree is vigorous, forming an open and rather spreading head.

THE PEA-NUT, OR PINDAR.

THE pindar, pea-nut, or ground-pea (*Arachis hypogæa*), is a leguminous plant, similar to the pea or bean, but differs from them in containing about ten per cent. of oil, resembling that of the almond, and consequently is more fattening and equally nutritious to man and animals. Therefore, from these properties, and the value of the green stems when plowed in as a fertilizer, we think the following remarks from Mr. M'Caughan, of Mississippi, are worthy of the attention of Southern planters:—

I planted, the 18th of February last, three acres in pindars, in rows five feet apart, the peas about 12 inches apart, in a common small furrow made with a bull-tongue plough, on level ground, having first broken up and harrowed it well. The weather afterwards, in March, was very cold, wet, and unfavorable, and killed many of the peas which had sprouted, so that I had a very poor stand; they, however, grew finely, and interlocked across the rows, and covered the ground pretty well. On the 27th of October I began digging (for fear of frost) by loosening the ground a little round the bunch with an iron fork with three prongs, each above 13 inches long, and then pitched the fork under the tap-root and pressed it up; a hand follows and lifts up the bunch, most of the peas adhering to it, and shakes the sand (dirt we have none) all off, and lays it out straight to cure like hay; when sufficiently cured, tie up in bundles the proper size for a cutting-box, and stow away for winter food for horses, cows, &c., than which there can be nothing better or more nutritious. The pindars that are torn from the vine are partly left on the top of the ground, and can easily be picked up after a rain. I then turn the hogs in, and they gather the balance, and fatten as finely on them as on corn. Our poorest land will yield 50 to 80 bushels of the peas, and over a ton of hay per acre, and altogether I regard it as one of the finest crops the Southern farmer can raise. If we could afford to give an entire crop to the land, I am persuaded it would be quite as good as a crop of your best red clover to fertilize it. There has been a mistaken policy pursued, almost universally, in cultivating the pindar, by covering over the tops with earth when they begin to bloom; this is not only unnecessary, but positively injurious; although the top or vine grows straight up at first, yet when it is time to seed, the small fibres on the end of which the pea grows, arise, the vine inclines to the ground until it finds a proper location, and then extends its branches, two, three, or four feet in length in every direction, touching

the earth. The only cultivation requisite is to keep the ground loose and clear of weeds and grass, and as level as possible, so that the fibres on which the pea grows can penetrate the ground easily. I intend, next year, to plant pindars in hills, or, rather, in checks, two feet apart each way, which will cause them to grow in upright bunches, yielding more hay, and will be easier dug, and, I think, will probably yield as many peas.

LONG ISLAND LANDS.—No. 2.

LONG ISLAND, with the exception of the range of hills which extend through its entire length, and the drift on its northern slope, adjacent to the Sound, is strictly a marine formation reclaimed from the ocean. The "back-bone," or range of hills before referred to, is thought to be based upon a reef of rocks, which first formed a bed whereon the waves washed up the sand, and has so continued to accumulate until the present time. It may be briefly stated, that in no instance is the soil of Long Island derived from the rocks *in place*, none of which have hitherto been discovered, except in a small tract at Hell-Gate, the entire mass of the island as far as known, being drift, marine sand, clay, peat, or vegetable mould.

That portion of the island called the "back-bone," is largely made up of boulders, or blocks of stone, varying from the size of a pebble to large masses of a weight of several hundred tons, occurring in deposits of sand, clay, and gravel, which correspond in character with the rocks in place, in Rhode Island, Connecticut, and along the river Hudson, leading to the conclusion that they were derived from those places by means of ice-bergs, or a strong current flowing from the north. For instance, "the boulders on the east end of Long Island are like the Granite, gneiss, mica-slate, greenstone, and Sienite of Rhode Island, and the easterly part of Connecticut; further westward, opposite New London, and the mouth of Connecticut River, are boulders like the New London and Connecticut River granites, gneiss, and hornblende rock; opposite New Haven, are found the red sand-stone, and conglomerates, fissile and micaceous red sand-stone, trap conglomerate, compact trap, amygdaloid, and verd antique; opposite Black Rock, are the granites, gneiss, hornblende, quartz, and white limestone, like those in Fairfield county; and from Huntington to Brooklyn, the trap (compact, crystalline, &c.), red sandstone, gneiss, granite, hornblende-rock, serpentine, and crystalline limestone, are found to be identical in appearance with those of the country between New Jersey and Connecticut."

It is further evident that the soil of the entire mass of the island is of a marine or diluvial formation, from the fact that shells, peat, lignite, or fossil wood, have frequently been dug up in making wells and other excavations, the principal part of which have been taken from the strata below the drift, even to a depth of thirty or forty feet below the level of the tide.

The composition of the soils of Long Island therefore depends upon the direction from which they came, a large portion of that of the County of

* Thompson's Hist. of Long Island, p. 45.

King's, and the northern parts of the counties of Queen's and Suffolk, being of a superior kind.

The composition of the drift, which constitutes the soil of the northern face of the island, is as follows:—

Water and organic matter.....	6.00
Silicates.....	87.10
Peroxide of iron and alumina.....	6.25
Carbonate of lime.....	0.25
Magnesia.....	trace.

99 50

The soil from which the above was taken, is what is called a sandy-loam, and is somewhat retentive of manures and durable. The mass below is gravel, or fragments of gneiss, quartz, and mica-slate. It was taken two and a half miles above Oyster Bay.

The soil of a large portion of Hempstead Plains and the scrub-oak lands lying to the eastward, as well as of the southern declivity of the "backbone" of the island, is principally composed of marine sand. The surface is frequently mixed with black mould, in which there is a small per centage of lime combined with an organic acid. This soil, when washed free of vegetable matter, furnishes only a trace, at most, of lime or magnesia—being merely a white beach sand, or perhaps in this position a yellow sand, tinged with the oxide of iron. The raw, black, vegetable mould, which covers the surface of these plains, when first turned up by the plow, appears to be very rich and fertile, produces moderate crops for a time, but soon fails without special manuring.

A specimen of soil obtained one and a half miles west from Hicksville gave the following ingredients:—

Water and organic matter.....	5.00
Silicates.....	87.06
Peroxide of iron.....	2.75
Carbonate of lime.....	0.37
Magnesia.....	0.13
Alumina.....	4.00

99.31

From this analysis, it may be inferred that there is a great deficiency of the alkalies and alkaline earths, and that lime and magnesia are only sparingly present in all parts of the island, except those portions bordering on the Sound. The nature of the great mass of the soil of the island from the surface downwards, is porous; and is composed of so large an amount of washed sand and pebbles, that a large proportion of all soluble manures sink below the reach of the roots of plants, in a very short period, rendering it very difficult for the farmer to increase the fertility of his land without frequent applications of manures.*

In a future number we shall endeavor to point out what we conceive to be the best means of managing or reclaiming the poorer classes of these lands.

SUPERIOR MOLASSES GINGER-BREAD.—Take two tea-cupfuls of molasses, one tea-cupful of butter, a table-spoonful of ginger, and two tea-spoonfuls of salæxatus and mix all well together. *Bake quick.*?

* See Nat. Hist. of N. Y., Part 5, pp. 318 et seq.

MANAGEMENT OF HONEY-BEES.—No. 14.

Hives—their Varieties, &c.—Everything used in this country as a domicile for bees, is generally called a *hive*, whether it be made of wood or straw, or whether it simply be a hollow tree cut off at a proper length.

The original conical *straw* hive, made by the cottagers of Europe, in consequence of its cheapness, and sometimes used in the United States, is but a poor substitute for the wooden hive. Hives should be made of white-pine *inch*-boards. There is no material so good as *pine*-boards, that can be recommended for general use. They should be an inch thick to prevent warping and cracking, and to serve as a non-conductor of heat and cold.

There is a style of hive used in England, denominated the *cross-box* hive, recommended by Dr. Bevan, in his work on the honey-bee. The principle is this:—that in consequence of the bees having a tendency to depart from the proper *thickness* in building combs, that is, such thickness as produces the greatest increase and prosperity, the science of man interferes, and furnishes *guide-bars* for the bees to work upon. These bars are loosely placed in a rabbit at the top of the hive, and the distance is gradually widened from the centre to the sides, in order to have the centre-combs closer together than those built at the sides. The reason of this is, that the *brood*-combs should be, in the *centre*, of a certain thickness, and a certain proportion of the whole number built. Bevan says, that without these *guide-bars*, the bees will, or may construct too many *store*-combs, which (as I have before stated) are unfit for breeding purposes, and in consequence of this lack of brood-combs, the apiarian will find, after a few years, that his bees are greatly deficient in fecundity and general prosperity. Thus speaks Bevan. These cross-bars being put in their proper places, the top board of the hive is put in with screws, so as to be taken off at pleasure. This enables the bee-master to withdraw combs from his hives at any time he pleases. The side connexion with the wood is cut with a long knife, something like a *spatula* used for compounding drugs, and then drawn out at the top of the hive. There are some advantages in this arrangement, but for general adoption it is out of the question. It involves too much expense and trouble for *American* use. Besides this, I deny his theory that the bees depart from a correct thickness of combs, when left to themselves. On the *chamber*-hive plan, I know it is not so, *if the communication to the chambers is left open* at the time of hiving and during the first month. The bees take it for granted, that whenever they wish to build *store*-combs, they can ascend into the chambers to do so; consequently, their works below are in uniform combs. I find mine so, and I find the young brood to extend to the last outside comb. I am inclined to think that Bevan is right, where there are neither lateral boxes nor chambers open to the bees on hiving them for the season, that the bees consider the space in which they are placed, all the room that they are ever to have, consequently they make provision for the winter to the injury of the production of their species.

If we observe, we find that the holes through

which the bees pass into the chambers, are always carefully left open by them when every other opening is tightly cemented. This is conclusive evidence that the bees anticipate the use of the chambers, sooner or later, as store-rooms. In order to cause the bees to work upon these bars, a *guide-comb* must be attached to one of the outside bars, and the bees will build upon each succeeding bar as a matter of necessity. The guide-comb may be quite small, say two inches long and one broad. If no guide should be afforded, the bees might build across the bars. There is another way, however, to make bees build their combs in such direction as one requires, as follows. When bees are hived, they always ascend to the highest part of the hive to commence building their combs—that is, if the hive be placed on a slight inclination, by raising one side two or three inches, while the other side is in close contact with the table used, the bees will ascend to the highest side, and build their combs *horizontally*, and as bees generally lay the foundation of the first comb on the second day on which they are hived, by inclining the hive, we can have the combs run in such direction as we desire. An advantage of cross bars is in being able to cut out and withdraw a comb at pleasure, in the spring, to supply *brood-comb* for artificial swarming. The renewing of old combs may be effected on this plan, by withdrawing *half* of the contents of a hive during the swarming season of one year, and the other half in the next season.

I speak of this method as feasible, but not as advisable as a general rule; but in order to allow those who may wish to try the advantage of it, I submit the distances of the bars as given by Dr. Bevan, which are as follows, viz. the three centre-bars seven-sixteenths of an inch apart, and gradually widening the distance on each side to nine-sixteenths of an inch between the two last bars. The bars are one and one-eighth of an inch wide, and half an inch thick. With bars of these dimensions, Bevan used hives eleven and five-eighths inches square. I allude to this kind of hive merely because it is considered as all-important by Dr. Bevan, whose work is the only one of merit that has a general circulation in this country. I myself do not, and will not try the experiment, being satisfied with leaving "well enough alone." Indeed, the art of making bees profitable does not lie in mystified complications, which perhaps the world may one day find out.

T. B. MINER.

Ravenswood, L. I., Nov. 1847.

NEW YORK FARMERS' CLUB.

Successful Cultivation of the Brown Corn.—At a late meeting of this Club, Dr. H. A. Field exhibited from his farm specimens of Indian corn-stalks with the ears attached. One was the variety called Brown corn; the seed from which it was raised, he obtained last spring, from Long Island, Lake Winnipissiopee, in New Hampshire. The crop, he said, has far exceeded his expectation. It was planted

three feet apart in an orchard, about the middle of May, in the time of a severe drought, and was ready for harvesting by the middle of August. The height of this corn was about five feet, the stalks slender, and upon an average, it contained two full grown ears to each, well filled with large grains, and growing only about eighteen inches above the ground. The field from which the above sample was taken, it was estimated yielded ninety-one bushels of shelled corn to the acre, or about one-third more than his ordinary crop. Had this variety been planted throughout the State of New York, the present corn-crop, he said, would probably have been increased 5,000,000 bushels!

Dr. Field also exhibited a specimen from the seed of the premium yellow corn of the last Fair of the American Institute, which contained only one ear on a high stalk, and was then in its milky or immature state. The latter variety was planted earlier than the other, and suffered much more severely from the drought. Dr. F. said that he considered the Brown corn to possess many important advantages over the ordinary kinds, among which he enumerated the following:—

1. It produces a greater yield, the mode of culture being the same.
2. Its rapid growth and early maturity render it secure both from late spring, or early autumnal frosts, and offer the advantage of early use or readiness for market.
3. From its hard, flinty character, and the abundance of oil it contains, it is very nutritious and valuable for shipping.
4. Owing to the diminutive size of its stalks, it is less exhausting to the soil, less liable to be blown down by high winds, and may also be planted at less distances apart.
5. It has the peculiarity of thriving in orchards, or among other trees, where other varieties generally do not succeed.

GRANGER'S IRON-WITCH COOKING-STOVE.

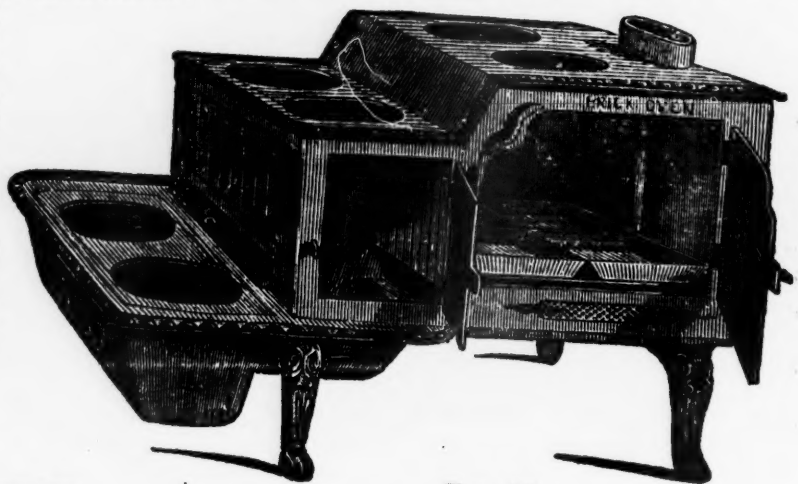


FIG. 89.

Stoves are now so generally used all over the Middle and Northern portions of the United States for cooking, that one is to be found in almost every dwelling. Common as they are, the mass of them are defective, and in many cases very poor. We feel that we are doing a great service to our readers by recommending them to the use of proper stoves for cooking, particularly the planters of the South

whose system of economy in cooking is very bad at present, incurring a vast deal of labor and expense for fuel, to say nothing of the imperfect manner in which it is often done. In fulfilment of our promise in the October number, we would now call attention to Granger's iron-witch air-tight cooking-stove, denoted by the adjoining figure, the main object of which has been to get as perfect and convenient an implement as possible, and at the same time to have it simple and without complication of flues, dampers, &c.

The front of the oven is lined with brick, which keeps up that steady even heat, which is so desirable in baking, and in which particular cast-iron ovens are found so defective. By means of the brick in this stove, the baking is more like the old fashioned brick-oven, which it is universally acknowledged bakes in the best manner.

A summer-furnace on the hearth is also attached to the stove with two boiler holes on which any and all the boilers fit. The furnace will be found very desirable for summer use, when but little fire is wanted; as a few chips or charcoal will do the cooking. The furnace can also be used at the same time with the stove, giving six boiler holes. A gridiron is also well fitted to the hearth for broiling, by raking the coals directly from the fire-chamber on to the grate.

The grate in the fire-chamber is omitted, and the wood is burned directly on the bed of ashes, by which means the fire can be covered up and kept over night, which cannot be done on a grate; the expense of purchasing new grates is thus avoided.

There being no interior blind flues, there will consequently never be any difficulty with choking of the draft, or trouble in cleaning out soot and ashes.

The stove will bake with as little fuel as any other, as will be seen at a glance; the heat being brought directly in contact with the top and bottom of the oven at the same time; and the stove being air-tight, the amount of fuel burned can be regulated by the draft damper.

REVIEW OF JUNE NUMBER OF THE AGRICULTURIST.

WHETHER the pure, bracing air of this lovely isle of the Atlantic will invigorate this article in the same degree that it has my mental and bodily faculties, I cannot say; but the scene around me has called up so many reminiscences of New England life, that I hope to be able to give a candid review of one article in this No. written by one born upon that soil, from whose views I shall differ in some essential particulars. I shall pass by all the preceding articles, and commence at once with that most requiring notice, entitled

Division of Agricultural Labor.—The most earnest and supplicating prayer that I could offer for the happiness of America, would be, that the rural population of this country might never see that day, when the "divisions of rural labor" are carried to the "nice extremes" of England. For then we should become as these, a nation of landlords and tenants—of wealthy farmers and pauper laborers. This is a state of things that I know the writer of this article does not wish to see in America; for I know him well, and know that his whole being is

filled with benevolence. But he is utterly mistaken in his idea that the perfection of English agriculture is owing to the *division* of labor, half as much as it is to *cheap* labor.

I grant the position that those laborers, who are bred from youth to the single occupation of being "plowmen, ditchers, reapers, stackers, herdsman, shepherds, or teamsters," may each excel in their single branch over the real "Jack at all trades," which abound, and will, must, and should abound throughout our Yankee race, while the laborer owns the acres that he tills; and however humble his log cabin may be, is able to say in proud exultation, while welcoming the poor emigrant from land-monopoly-ridden Europe, "This is my Home—this soil is mine! Here I can raise all the necessities of life! I can plow, ditch, reap, stack, herd my own cattle, and sheep, and swine; butcher my own meat, and tan the skins; in winter make my own shoes and harness, while my wife will make her own soap and candles, cloth and clothing; and I can get all the other real necessities of life by exchanging some of the products of my own labor with some of my neighbors." "But you are a Jack of all trades." "Yes, we are all so in this country; and if 'good at none' we have an abundance of food and clothing, and ought to be eminently happy."

Compare not then this system in disparagement with that where labor is divided, but food is not. The accumulation of dollars is not, or should not be the leading object; but an increase of human happiness upon so broad a scale that all might partake of it.

Mr. Allen speaks of division of labor, "dabbling at everything in a small way," as unworthy the attention of the cultivator of thousands of acres. Now I am fully persuaded in my own mind, that the cultivation of land by thousands of acres in this country, at all events in the free States, can never prove eminently successful to the cultivators in general, or conducive to the happiness of the laborers, in an equal degree with cultivation in a small way, even if they do dabble at everything and accomplish nothing.

But let us have an example or two of confining farming operations to a single branch. Many farmers, of the true Puritan stock, too, in the northern part of Ohio, previous to the summer of 1845, had so far forgotten how they were brought up—not educated, that they confined their farm operations entirely to stock and dairy products. The draught came, and their farms, all laid down in grass, afforded no summer feed for the production of butter and cheese, and no hay for winter, and the owners were nearly ruined. Many others who still pursued the course of "dabbling at everything in a small way," were but slightly injured.

A letter lies before me from a friend who left his New England home—his ancestral forty-acre farm, for the great wheat-growing region of the Western Prairies. For here he was tired of raising everything, and he meant to find a place where he could get rich without so much work; and he was satisfied that he would do it raising wheat at the West. Now he writes, "I am ruined. I have spent everything I had, and am in debt besides, in putting in 400 acres of wheat upon this rich, tempting,

prairie soil, and it is all winter killed. I did not intend to put in any spring crop, having previously determined to devote all my attention to wheat; and now I cannot, for I have no means. Well, I have learned a good lesson—never to rely upon any one crop."

Again, Mr. Allen says, in speaking of the South, that they turn their attention to one crop, principally through necessity, because they are compelled to work their estates with a rude and ignorant force. This I deny. Not that their laborers are ignorant, but that they are so rude that they cannot be taught to perform the necessary labor of cultivating the most diversified crops. And it is often the case that we can find planters living side by side, and in a year of failure of the cotton, one is deeply injured, while his neighbor who cultivates food-plants, and grows stock, is able to sustain himself and feed and clothe his hands without falling in debt for necessarily purchased food and clothing. I believe, in the long run, that those planters as well as farmers at the North, succeed the best who diversify their cultivation so as to create a domestic supply for domestic wants. If it cannot be done on the farm, let it be done in the neighborhood, as far as is practicable by mutual exchanges. All such neighborhoods will be found comparatively independent, contented, and happy.

Mr. Allen asks, "is not the multifarious system of farming the true secret of want of success and bad husbandry of many of the Northern farmers?" I answer most emphatically, No. It is endeavoring to cultivate too much land, with too little labor. The case put of coupling the professions of law, divinity, and physic together, is not a fair one. Some of the most negligent farmers in the world are to be found along the Ohio and Mississippi rivers, on the richest alluvial soil in the world, whose crops never were diversified from the beginning of time to this present from corn and hogs, and who have not sufficient of the Jack-of-all-trade ingenuity to raise anything else or even do that one branch well. Here now are thousands of cases exactly in point to prove Mr. Allen's position, that if but one or two objects comprise his (the farmer's) attention, he will have seasons of comparative repose, which give him leisure for reflection, improvement, &c., &c. Yes, leisure that proves his ruin and shows some of the [dis-] advantages of a division of agricultural labor, which I never wish to see in New England, however astonishing its results may appear in Old England. I cannot but look at the tendencies of this article from the pen of a writer so well known and highly esteemed as Lewis F. Allen is, as deleterious.

It is not often that I meddle with the private business of any writer whom I review; but I am strongly tempted to do so in the present instance, just to show that he does not practise what he preaches. It is generally known that Mr. Allen is a large farmer—that though his family residence is at Black Rock village, he cultivates, and tolerably successfully too, some 400 or 500 acres of land on Grand Island, in the Niagara river, and is constantly bringing more land under cultivation as fast as 10 or 15 hands can clear it of timber.

And does he pursue the system of "singleizing?" Just about as much as his father before him, upon

his hard bound New England acres, where he was brought up to do a little of everything. Why, he does not even *singleize* in his stock raising. If it is convenient for him to do so, will he call to mind the late visit of the writer of this article to his farm, to see his really most beautiful lot of Short-Horn cattle? But not Short-Horns alone; for on the same farm is an equally fine herd of Devons.

Again, there is a little "dabbling" in at least two kinds of sheep. For there are to be seen on the same farm, a very good flock of the Cotswold, and another of South Downs. Now this gentleman is a stock-breeder, and any person who saw his flocks and herds about the time of my visit, must agree with me that he need not look further to find good ones.

But does he confine his farming operations to this branch singly? If he does, what was that new milk-house built for last winter? It strikes me it was for cooling milk in, which he sends in its purity in large quantities twice a day to Buffalo. But I need not particularize further to show that even he himself recommends what he does not and cannot practise; neither can one American farmer in a hundred ever attempt the "singleizing" plan without danger of ruin.

I would point out many more illustrative instances of the folly of depending upon one crop alone, but this article has already occupied so much space that I have but little left for all the other articles in the No. under review, and shall close with a slight notice of only a few of them.

Design for a Farm-House.—It is surprising that this plan should ever have passed the ordeal of a prize-awarding committee. As a dwelling for a country gentleman, who keeps his servants, it is not so objectionable. Some writer has said in your pages, that a farmer's kitchen should be the biggest and best room in the house. And so think I. If I was making a plan for a farm-house, I would not design the kitchen less than 20 by 24 feet. In this plan it is only 12 by 20, which is a fatal objection. The little 6 by 8 milk-room opening into the kitchen is not a farm-house milk-room. The nearness of the privy is another very objectionable feature. If cheese is to be made, a cheese-room separate from the dwelling should always be provided. Butter should never be made, worked, or kept with cheese, or any other strong smelling substance. If it is, it will acquire a bad flavor. The farmer's kitchen, besides being large, should be *light and airy*, with a broad *back porch*, well shaded, where the harvest hands could assemble before their meals, to wash or refresh themselves. In winter, what more pleasant sight than all the family and laborers of the farm, gathered around the crackling kitchen fire! This cannot be done in a house built upon the plan under review.

Comparative Weight of Pork and Bacon.—I think we have had an article of the same kind from the same pen before; but still this is interesting, and would have been more so if the writer had told us exactly how much pork could be made from a given quantity of corn. I hope that experiment will be tried and the result given. Tables of this kind are valuable for reference, when made by one upon whom we can depend for their accuracy.

Preparation for the Hay and Grain Harvest.—

Then the small fork for spreading and turning the hay, is the principal point in this article that I wish to remark upon. Not the fork, but the practice of spreading and turning the hay at all. Timothy hay, in particular, never should be cut till the seed begins to ripen. That which is mowed in the morning in good weather, will do to put in cock in the afternoon, directly from the swath. Or that which is mowed to-day, will do to cock to-morrow, and it will cure well, and all the labor of spreading and turning may be dispensed with, and still have a better quality of hay. [That depends something upon the quantity grown per acre. If it be from two to three tons it is usually necessary to spread it.] Use a good three tine fork to pitch the hay from the swath to the cock, or else use the horse-rake, and very little hand-raking will suffice. The recommendation about the grindstone is good for this latitude, and a portable one should always be carried to the field, where stones are as plenty as upon our native hills. But I have seen mowers in Ohio, who would not find a stone big enough to dull a scythe in a week. There the grindstone is but seldom needed. I believe the recommendation to use water-proof cloths to cover cocks of hay and shocks of grain, is too much neglected. Upon many a small farm they would pay cost every year. Pray, Mr. A., have you got them among your agricultural implements? I spent four hours in your city not long since, hunting for a few yards of cheap oil-cloth with which I wanted to make a cover that I could use in case of a sudden shower, to save a load, or unfinished stack of hay or grain. I found the article at last, and twice this season already have I saved the cost of it. A small cord at each corner is needed to fasten it on a load or stack, which can be done in five minutes; and then let it blow and rain—all is safe. One will last for years. If grain is well stacked it is better than in any barn.

Soil of the Red Sand-Stone Formation.—Will your admirable new correspondent, Rufus, inform your readers of the principal localities of the kind of soil he describes? It will enable many readers, old as well as young, to become familiar with what he describes. For instance, if he had said, while speaking of the soil described in this article, such is the soil at Hartford, Conn., &c., then those of us who are familiar with that, could judge of others by comparison. I hope he will continue his articles.

Capons.—About one half of your readers do not even alter their pigs and lambs and calves; and how can you expect them to alter their chickens? Besides, all the array of implements, paraded by some operators, is enough to frighten common folks from the attempt. If Mr. Phares can tell us how to dispense with those, then we may try.

Production and Preparation of Corn for the European Market, is one of the most important subjects that can be discussed at this time in your columns. The capability of American soil to produce Indian corn is so great, and extends over such a vast surface, that it is not probable that a year of universal blight will ever occur. And there are millions of acres of unoccupied soil, capable of producing 40 or 50 bushels to the acre without artificial manures, and with but moderate cultivation. There are vast regions of the West, where this grain does not

commonly sell for more than 10 to 15 cents per bushel; and I suppose the cultivators find it profitable at these prices, or they would not continue to grow it year after year. Such being the case, it certainly can be delivered in any Atlantic port, well kiln dried, and in suitable packages, *in the meal*, for one and a half cents per pound. And when all the growing facilities of transportation are fully made, it will be delivered for one cent per pound, for the best of sweet corn meal from kiln, or rather, steam-dried Indian corn. As I look upon it as decidedly the most important and most certain crop of the United States, too much cannot be said or written on the subject.

REVIEWER

IMPROVED STOCK AT THE WEST.

WE are happy to announce to the lovers of fine stock, that Mr. Wm. H. Sotham, who has for many years, in connexion with Mr. Corning, of Albany, bred choice stock of various kinds on their farm near that city, has recently leased and moved on to the fine grazing farms formerly occupied by R. L. Allen and ourselves, on the Niagara River, in the town of Black Rock, Erie county, N. Y. He has taken with him the choice of his splendid herd of Herefords, and his flock of imported Cotswold sheep, where he will continue to breed them for sale, as he has heretofore done in Albany.

In the same neighborhood, are the fine herds of Short-Horns and Devons; the long-wooled and South-Down sheep, of L. F. Allen.

Besides these, there are numerous choice animals of different breeds, in various hands, throughout and adjoining this county, among which we may mention as particularly deserving of notice, the Devon stock of Mr. Beck, and the Short-Horns and sheep of Mr. Hadfield, of Wyoming. But as Mr. Sotham has promised us a particular description of his stock for publication soon, we defer any further notice of it for the present.

It is a great gratification to us that the place where we have spent so many pleasant, and we trust not altogether unprofitable days, is still to be adorned with an improved stock; and we look forward with agreeable anticipations to the time when we shall be able to leave this paper farming and dealing in agricultural implements, and again come in contact with good old mother earth.

STAFFORD'S PATENT DRYER.

For preventing flour and meal from souring, and grain from heating. One of the machines is a cylinder with horizontal flange, which revolves in a trough, slightly inclined; the article operated upon is spouted upon the upper end, whence it works its way gradually to the other, passing many times over the cylinder. It is then discharged by a spout. The cylinder is heated by steam, and the condensed water is returned to the boiler; and the weight attached to the safety valve regulates the pressure and consequent amount of heat. The efficiency of the operation consists in the great amount of heated surface of cylinder and flanges which the substance passes over, and the perfect ventilation afforded.

The other machine is a stationary dryer, which is composed of a series of heating tubes within a casing, combined with a series of ingeniously devised perforated tubes which affords perfect ventilation to

the grain in its passage through the casing; at the bottom is a hopper and regulating gate; the heating agent is steam, and the condensed steam is returned to the boiler. It will be observed that in the stationary dryer no motive power is necessary, as is the case in all other machines for drying that have come under our notice. By these processes, grain, flour, meal, and other substances, have their moisture expelled without change of color, quality, or flavor; and when this is done the articles may be kept an indefinite time if the usual means are adopted to keep humidity from them. Of the importance and necessity of the application of such inventions, we need not inform our readers. A certain mode of preservation of our bread-stuffs will generally insure us a certain market in some quarter of the world.

TRIP TO FORT ADAMS—SOUTHERN HOSPITALITY.

HAVING just returned from a pleasant trip to Fort Adams, Mississippi, a brief sketch of some of the incidents by the way may not be uninteresting. The venerable bachelor, Major Trask, lives between Woodville and Fort Adams in a splendid mansion, and gave me a real Massachusetts welcome. I was pleased with his Yankee barn, the largest I have seen in the State. A wide passage runs through the middle with ranges of stalls for horses on each side. The manure is dropped through a trap-door, under the floor, where the sheep take shelter in winter. Oats and other fodder fill the lofts, instead of remaining stacked in the fields.

Major T. has very fine, improved breeds of cattle, and raises his own mules. His long avenue, or road, is lined each side with the pride of China, and locust-trees, a mile and a half long, which I found very pleasant, in screening me from the scorching rays of the sun. At his mill he has machinery for shelling and grinding corn, and for crushing cobs; also machines for sawing out boards, shingles, &c., all driven by horse-power, or rather that of mules. He has a superior breed of hogs, the Irish grazier's. The garden and shrubbery, on which he has displayed much taste, were in fine order. The Major is from the good old Bay State, and one of the most enterprising farmers in the South.

About six miles further, towards the Mississippi, is M. E. Sanders's walnut hill plantation, a beautiful and well managed place. Here also are fine cattle, hogs, goats, &c. Mule raising has also been practised by him, with success. The neatly-arranged white-washed quarter is laid out in a hollow square, encircled with the pride of China, and looks very comfortable. His gin arrangements deserve more notice than I can give them. His cane-scaffolds for sunning and drying cotton are excellent. A high pale-fence surrounds the whole, all neatly whitewashed. Of his plantation there are 1,000 acres, 900 of which are under cultivation or cleared. About a mile from the public road, in a romantic spot, you will find the residence of Capt. S., on his moorland place. Here you would be sure to be cheered with a cup of the best coffee, and meet with a genuine North Carolina greeting. I must not forget the fine figs and sweet apples on which I regaled. The Captain has a patch of sugar-cane, and no doubt can make sugar with success.

On my way home, I called at the hospitable mansion of my friend, Henry Dunn, Esq., who seemed to be gratified in showing me his plan of making and saving manure. He pens his cattle at night in a large enclosure, nearly level, on one side of which he makes saucer-like excavations, where he collects the droppings of the stock every few weeks, especially after a rain, having first drawn the same into small heaps, and then into large piles of a conical form, in which they remain till spring. This fall he intends to cover the enclosure with leaves, which will add much to the quantity and quality of the manure. In his crib-lot, he has a similarly prepared place for depositing horse manure, around the border of which his little negroes pour water to kill all fly-blows, thousands of which I saw drowned in their efforts to crawl away; and thus a great annoyance from stables is remedied. This is the first thing of the kind I have seen in the South. The old gentleman, over 70 years of age, attends to his own business, and is gratified in giving his friends a genuine South Carolina welcome. Here you will find excellent figs, pears, apples, plums, and peaches. He has a splendid Durham cow and bull, a fine young stud, and excellent mules.

At my friend Capell's, I saw an excellent bull, a descendant of the Hon. H. Clay's stock, brought there by a clever Shaker. He has also fine grafted fruits—the peach, apple, and pear, from Cincinnati. He has tried, and so have I, and is well pleased with your subsoil plows. On the road, I saw a splendid Durham bull, the property, I learned, of my friend Gunsby, whose new and beautiful house loomed up in the distance, from the road.

A. W. POOLE.

Woodland, La., July 28th, 1847.

ENGLISH GRASSES.

SWEET-SCENTED VERNAL GRASS (*Anthoxanthum odoratum*).—This grass is capable of forming a part of the herbage of pastures on almost every kind of soil, though it arrives to perfection only on those which are deep and moist. Its chief merit consists in its early growth, though, in this respect, it is inferior to several other kinds of grass that are later in flowering. It thrives best when grown with several different species, and therefore constitutes a permanent grass for pasture. It is said to give to newly-mown hay that delightful odor peculiar to its blossoms, which diffuse their fragrance throughout the English pastures in the months of April and May.

GOLDEN OAT-GRASS (*Avena flavescens*).—This grass is said never to thrive when cultivated simply by itself. It requires to be mixed with other kinds, in order to secure its continuance in the soil, and to produce in perfection. It thrives particularly well when sown with sweet-scented vernal grass, the crested dog's-tail, and grasses generally suited for lawns. It prefers a calcareous soil that is rather dry, although it grows freely in meadows of almost any kind.

CRESTED DOG'S-TAIL GRASS (*Cynosurus cristatus*).—This grass, in England, is considered an excellent sheep-grass. It will thrive on a sandy loam on a retentive clayey subsoil, but will do better on a rich loam, highly manured. It is particularly adapted for mixing with other grasses in seeding down a pasture or lawn.

Ladies' Department.

MAKING BUCKWHEAT-CAKES.

Do, dear Jane mix up the cakes ;
 Just one quart of meal it takes ;
 Pour the water in the pot,
 Be careful that it's not too hot ;
 Sift the meal well through your hand,
 Thicken well—don't let it stand ;
 Stir it quick—clash—clatter—
 Oh, what light, delicious batter ;
 Now listen to the next command ;
 On the dresser let it stand
 Just three-quarters of an hour,
 To feed the gentle rising power
 Of powders melted into yeast,
 To lighten well its precious feast.
 See, how it rises to the brim—
 Quick—take the ladle, dip it in,
 So let it rest until the fire
 The griddle heats as you desire.
 Be careful that the coals are glowing,
 No smoke around its white curls throwing.
 Apply the suet softly, lightly—
 The griddle's face shines more brightly.
 Now pour the batter on—delicious !
 (Don't, dear Jane, think me officious)
 But lift the tender edges slightly—
 Now turn it over, quickly, sprightly.
 'Tis done—now on white plate lay it.
 Smoking hot, with butter spread,
 'Tis quite enough to turn our head.
 Now I have eaten—thank the farmer
 That grows this luscious mealy charmer ;
 Yes, thanks to all—the cook that makes
 These light, delicious buckwheat-cakes.—*Selected.*

HEATED ROOMS.

Rooms heated with anthracite coal, and rooms heated with close stoves in which wood is burnt, have very dry atmospheres. The use of water in such rooms is very congenial to health, but the water should not be placed in an iron or tin vessel upon the stove, for the reason that it will undergo that degree of heat which will make its vapors offensive and injurious to breathe. It is as injurious to the human system to breathe putrid water vapors of this kind, as it is to breathe the vapors from stagnant ponds in hot weather. If water is used upon a stove, an iron pan should be made use of, and this filled with dry sand; in the sand set an earthen bowl filled with clean water, which should be changed twice a day, and the bowl washed and kept as clean as if used for a drinking vessel.

Where hard coal is burnt in a grate, a glass globe should be suspended in the room filled with clean pure water, and as the heated air rises to the top of the room, it will steadily evaporate the water and moisten the dry and heated air. Persons who prefer the atmosphere of salt water vapor, can add salt to the water, or if they prefer an aromatic atmosphere, they can add Cologne water, or any other perfume which they prefer. It is as important to have clean air for breathing as to have clean water for drinking. Basement rooms, where hard coal is burnt, should be frequently ventilated. Small children accustomed to stay in basement rooms find a bad air near the floor. This air should be removed by allowing the doors to be opened frequently to let in fresh air. A little care in these matters will tend wonderfully to comfort and enjoyment.—*Ex.*

BUILDING COAL-FIRES.

As anthracite is now used it makes a fire that is unpleasant, expensive, irregular in temperature, and productive of great dust and disagreeable and unhealthy gases, which are wafted about to the great inconvenience and annoyance of the inmates of

every house in which it is used. If properly and judiciously used, the anthracite fire is of uniform temperature, free from deleterious gases and annoying dust and ashes, and with a saving of from twenty to thirty per cent., as may be seen by the experiment. Anthracite should be carefully broken into uniform pieces of the size of a nut, and in building the fire in the morning as little charcoal or other kindlers used as will assist in starting the ignition with a blower. When the whole is well ignited, cover it with the cinders obtained by riddling or sifting the extinguished contents of yesterday's grate, including those of the size of a pea, or even smaller. When this, too, has become partially ignited, the whole should be covered from an inch to an inch and a half, or even two inches thick, with a paste or mortar made by mixing the ashes sifted from the cinders with water to the consistence of mortar for plastering. The fire should be left in this situation undisturbed until almost bed-time, or until the room begins to get cool. The crust should then be broken into pieces of the size of an egg, levelled, well wet with water, beat or patted down into an even cover, and left until the next morning. Thus the poking of the fire is dispensed with altogether, and the only moving of the ashes is the removing them from the fire-place or grate into the hods to be carried out of doors, to be sifted preparatory to making the fire. Fires built in this manner are of even temperature, free from dust and disagreeable and deleterious gases, and at a saving of from twenty to thirty per cent. in the expense of coal.—*National Intelligencer.*

RURAL PASTIMES BY SOCIAL LABOR—No. 2.

ANOTHER example of comely amusement I shall mention, is to my mind a most delightful, as well as a most useful kind of recreation; for those engaged in it carry home with them the heart-cheering remembrance of a day well spent. In many places it is the custom, once or twice in a year, for the women to agree upon a time when they will have a party or bee at the house of their minister; and for many days previous they are quietly preparing for it by gathering materials to work with and upon, as well as provisions nominally for the day; but in reality enough to last for a long time after. Each one takes with her, according to her fancy or ability, a roast turkey or goose, a boiled ham or round of beef—pies, cakes, and delicacies—a piece of sheeting, or suits of pretty clothing for the baby; and to these offerings their good husbands or friends often add a barrel of flour, or the winter's stock of potatoes.

The youngest and most active present undertake the task of entertaining the company, by waiting on the table, and serving the guests, &c.,—others cut out and fit the work for the sewers, and thus with respectful cheerfulness the labor of love goes on, until amid the blessings and prayers of the grateful family they exhibit the day's work—the shirts, aprons, frocks, and warm winter garments "for the household of faith"—remembering the command with promise, "if thou hast much, give plenteously; if thou hast little, do thy diligence gladly to give of that little; for so gatherest thou thyself a good reward in the day of thine adversity." *Eutawah.*
 E. S.

Boys' Department.

EFFECTS OF AZOTIZED MANURES.

CROPS supplied with highly azotized manures attain a size far exceeding that they attain under ordinary cultivation. Hence turnips will be twice the size both in leaf and bulb, and the cereal grasses will be double the dimensions; not to mention that many sandy soils were entirely incapable of growing turnips until bones, a highly azotized manure, were applied; since which time, they grow not only turnips and seeds, but wheat very vigorously. Before that period they could only be employed in the growth of rye. Azote alone solves the problem; wheat contains 0.23 per cent. of azote; rye only 0.17. Such soils would, however, grow potatoes, and were ample in their production of the Jerusalem artichoke; potatoes containing but 0.15 per cent. of azote, and artichokes 0.04. The green color of plants is due to their carbon, because plants excluded from light, a necessary vehicle of their assimilating carbon, grow indeed, but yellow, watery, and destitute of carbon. Celery, which naturally is rank and sticky in its stems, by having the light excluded by covering with soil, becomes soft and insipid. Water and azotized manure are both necessary to its complete development as a blanched product; hence the azote stimulates the growth, and hydrogen and oxygen are absorbed instead of carbon.

Azote is wasted and carried off a farm in a thousand ways. Every bushel of corn; every bat of straw; every load of turnips, potatoes, carrots; every pound of hay or clover,—of peas,—of beans,—of every animal bred and sold off—deazotizes the farm; nor is this the only process; weeds, if allowed to dry and left exposed on the surface, and tons of which are every year burned by many farmers, cause an exhaustion of incalculable quantities.

The manure of fat animals has long been considered of more value than that of lean ones. A feeding pasture would retain its quality for years as such, but when breeding is resorted to, the soil is invariably deteriorated. This is inexplicable on the ordinarily understood principles of causation, but this view clears up the matter at once. Feeding animals lay on only fat, or nearly so; fat is destitute of azote, and therefore they leave the azote in the excrements, it not being necessary to the animal economy. Growing and lean animals, on the contrary, require supplies of flesh and bones; the basis of the former (*fibrine*) contains as much as 19.934 per cent. of azote, and the basis of the latter (*gelatine*) 16.998 per cent.

Blood and bones being the best representatives of the gas, might therefore be expected to be very valuable manures; experience decides them to be superior to any, simply because they are concentrations of the azote obtained from the poor breeder's farm, in England, in the shape of bones and blood of the animal, and he has to employ ships and sailors to bring him azote to supply its place in the shape of bones from Russia.

Azote has been hitherto almost overlooked. There is, however, a greater reciprocity of dependence between vegetables and animals than is gene-

rally understood; besides the latter giving off carbonic acid, and the former absorbing it, and giving off oxygen again to be absorbed by animals. There is also a mutual interchange of the principle in review. Azote is necessary to animals and their existence, and they obtain it by consuming vegetables. It is also necessary to vegetables in order for them to supply it, and they again obtain it from animals. Decomposition and organization are thus more connected with, and dependent upon each other than is generally supposed.

Plants, however, will grow in charcoal for a considerable period. It has been contended from this that azotized matter must necessarily be introduced by the air, supposing it to be necessary to the development of the plant. This supposition is not at all necessary, however, for Berthollet found the aeriform products of the distillation of charcoal to contain a considerable quantity of azote. If this, therefore, were available to the plants by any process of decomposition, their developments were capable of effecting, it does not prove its being necessarily obtained from the atmosphere.

The free fermentation of manures has been much objected to by agricultural chemists, because so many of the gases useful to vegetation are dissipated by the process. No farmer, however, applies his manure without considerable fermentation, because he finds well fermented manure much more valuable than unfermented. As charcoal has the most amazing power of absorption, and will, in 24 hours, absorb 90 volumes of ammoniacal gas, may not this carbonaceous matter have the tendency of absorbing the ammonia and retaining—not fixing it—to give off to the plants, and as it has the greatest capability of absorbing the last named gas of any other, may not this solve the difficult problem, or at least partly solve it? Its capability of absorbing also 35 volumes of carbonic acid gas renders the apparent loss of that gas by the first processes of fermentation partly compensated for.

The effects of unfermented dung in a dry season are also, as regards moisture, considerably modified by the presence of the carbonaceous matter it exhibits when more fully decomposed. Undecomposed vegetable matter renders the soil porous, and conducts heat rapidly; the carbon conducts the caloric much more slowly, and hence is more favorable to the soils retaining its moisture.—*Condensed from the Farmer's Herald.*

CHEESE AS AN ARTICLE OF FOOD.—This well-known substance has been objected to as an article of diet, but without sufficient reason. That the hard, inferior kinds of cheese are not very digestible must be acknowledged, and when eaten in excess may overload the stomach; but when the quality is good, and the digestive organs are in a healthy condition, it proves not only wholesome but very nutritious. Like most other kinds of food, cheese digests more readily when well masticated, and the neglect of this precaution is one reason why it frequently disagrees with delicate stomachs. It is rendered more agreeable to most persons by toasting, but becomes less digestible by that operation. When taken as a condiment, especially when rich and old, it powerfully promotes the secretion of the saliva and gastric juice, and thereby aids the stomach in performing its proper functions.

FOREIGN AGRICULTURAL NEWS.

By the arrival of the Steamer Cambria, we are in receipt of our foreign journals to the 4th of October.

MARKETS.—Ashes limited sales. Cotton has fallen fully $\frac{1}{4}$ d per pound, particularly among the lower qualities. Flour and Grain quite active at a small advance. Provisions and other articles, little change.

Money was in great demand, and the interest paid in some instances, as high as 10 per cent. Many of the oldest and most respectable houses were daily stopping payment, and all confidence seemed to be destroyed. Nothing like the present state of mercantile affairs has been known since the bursting of the great South-Sea bubble.

The Crops.—There seems to be little difference of opinion as to the productiveness of the harvest of the United Kingdom. Barley is probably the greatest crop ever grown. Wheat, on the whole, has been good, and something better than last year, but the quality is not generally so fine. Oats prove a good fair crop. Beans and peas are deficient probably fully one-third. The potato disease is again spoken of, but as of a less destructive character than the last two years. There is, however, only one general opinion, that a considerably less breadth of land was planted with this esculent last season: the present price is about one hundred per cent. over that of ordinary seasons. Notwithstanding that a satisfactory result may be anticipated from the late harvest, the present and prospective rate of consumption is evidently greater than it is calculated to supply; and there can be but little doubt that in the course of the next twelve months, large importations of breadstuffs from abroad will be required, and obtained at moderate rates, as the continental and American harvests are reported of even more favorably than those of the United Kingdom.

Slaughter of Oxen and Sheep.—Within the last two years, 373,400 oxen and sheep have been slaughtered in New South Wales, in order to boil their carcasses for tallow.

Amount of Beet-Root Sugar in France.—The amount of beet-root sugar made in France during the present year is 107,590,110 lbs., being an increase of 26,596,432 lbs., on the quantity manufactured last year. The duty paid in the 12 months was £650,000 sterling.

Increased Culture of Tobacco in Algeria.—The cultivation of tobacco has so much increased in Algeria that nearly 300,000 kilogrammes (300 tons) will be purchased during the present year for the French Government, which monopolises the sale of tobacco in France.

Chemical Analysis of Tea.—In the memoirs of the London Chemical Society there is an interesting paper by Mr. Warrington, on the analysis of tea, in which he states that he has not only removed the whole of the coloring matter, or glazing, from green tea, but he has been able to analyse the matter removed, and to prove it, by chemical evidence, to consist of Prussian blue and gypsum principally. So that in fact the drinkers of green tea, as it comes to the English market, indulge in a beverage of Chinese paint, and might imitate the mixture by dissolving Prussian blue and plaster of Paris in hot water. The Chinese do not themselves drink this painted tea; they only sell it.—*Gardeners' Chronicle*.

Sowing Seeds.—It is not sufficiently known amongst gardeners, that their ineffectual endeavors to raise some plants from seeds, often arise from their being kept through the winter, for spring sowing. If the seeds of many herbaceous plants and seeds be not sown as soon as ripe, they never vegetate. This circumstance is interestingly alluded to in reference to the Cyclamen, in Maund's Botanic Garden and Fruitist. It is there remarked, "Cultivators overlook the fact, that the seed should be sown as soon as ripe; it never should be thoroughly dried; the plant itself asks, as plainly as plant can ask, for immediate sowing. The circling

downwards of its peduncles, with the seed vessels, after flowering, to convey the seeds to the soil, should be our lesson. Here nature suffers not the seeds to dry, by suspension in the atmosphere; but, by independent locomotion, the plant nestles up its brood, and even previously to the maturity of its offspring, conveys them in her bosom to the earth."—*Gardeners' Chronicle*.

Bones as Manure.—The researches of the chemist and the practical testimony of the farmer having more fully established the value of bones as a manure, not for turnips only, but for various other crops, it behoves us to ascertain whether they have been employed in gardening as extensively as they deserve. If we find they have not, we ought to lose no time in making use of them. The greatest obstacle to the more general use of bones in gardening, as well as in farming, is their undergoing decomposition so very slowly. But this difficulty is got over by dissolving them in sulphuric or muriatic acid. This plan, however, though excellent as far as turnip-culture is concerned, must be defective, inasmuch as it confers no lasting or permanent benefit on the land. Professor Way prefers using two parts of the bones undissolved, on the principle of their more continued and permanent benefit. I would, however, very particularly direct attention to a sort of bone-manure not in general use (perhaps owing to its limited supply), which, being very fine, requires no digesting with sulphuric or muriatic acid, and which is both immediate and permanent in its effects. This bone-manure is the saw-dust of a button factory. I do not know what quantity of this dust is to be had annually in this country, but this I do know, that if we could reduce our bone-manure to the finely divided state of this dust, we should then have a most valuable fertilizer without additional labor or expense. [Ground bones or bone-ash is much the same thing.]—*Ibid*.

Harvests without Previous Sowing.—In the Schnellpost we find an account of a method of compelling the wheat-plant to become perennial, like grass, and to perfect its grains annually without the yearly sowing of seed, which has been successfully practised at Constance, in Germany. It was discovered by a steward of an estate named Kern. His method, after plowing and manuring the land and sowing it with summer or winter wheat, is, to mow it in the spring before the ear makes its appearance. This process is repeated several times in the season, and the product is used as hay. The plant is then allowed to grow and be cut in the ordinary manner. The next year it ripens earlier and bears more abundantly than wheat treated in the ordinary manner. It is manured in the autumn like grass in the meadows, and in spring cleared from weeds. In this manner, from one field four successive harvests have been gathered.

Rules for Gardeners.—Study to produce, in perfection, vegetables, fruits, and flowers in their proper season. Strive to render a just equivalent to your employer for the expense he incurs. Be careful of everything put into your charge. Let all your operations be performed with neatness, and endeavor to preserve this general appearance in the grounds, gardens, and houses under your control. Never defer until to-morrow what ought to be done to-day. Time and nature will not wait, and the proper season will be neglected; nothing is gained by procrastination, but a great deal lost. Be punctual in hours of attendance, and waste no time during working hours. Care, attention, and management do more business than strength and expenditure. As far as practicable, finish one piece of work before another is commenced. Bear in mind self-improvement. Exercise the memory on all occasions, and anticipate the wants of every season. Provide against the contingencies of the weather. Have some work in reserve for a rainy day. Read these rules over frequently, and try to keep them in your recollection.—*Gard. Chron.*

Editor's Table.

VIRGALIEU OR WHITE DOYENNE PEARS.—Will any one who has two or three hundred of this kind of pear-trees for sale, inform us what is the lowest price he will take for them?

FLORAL EXHIBITION OF THE BROOKLYN INSTITUTE.—This pleasing anniversary was opened at the Lyceum, in Washington Street, on the 28th of September, and continued open three days. Although not large in number, the articles exhibited were very choice of their kind, and gave universal satisfaction to the numerous visitors present. Among the fruits particularly worthy of notice, were Isabella grapes, from George Woodward, of Port Chester, three inches in circumference; peaches, oranges, melons, &c., from Story and Shaw, of Brooklyn, preserved by ice, after Kephart's method; preserved strawberries and gooseberries from England, by Mr. Thomas S. Woodcock; quinces and ox-apples from Henrys, of Brooklyn, twelve inches in circumference; and Duchess d'Angoulême pears, from L. Provost, of Astoria. The hall was splendidly decorated with bouquets and flowers, among which were choice collections of dahlias from J. M. Thorburn, of Astoria, and Dunlap and Thomson, of New York. The garden vegetables exhibited were very fine and large of their kind, a squash in particular from Henrys, which weighed 125 lbs.

A NEW MEDICAL DICTIONARY; containing an Explanation of the Terms in Anatomy, Human and Comparative, Physiology, Practice of Medicine, Obstetrics, Surgery, Therapeutics, Materia Medica, Pharmacy, Chemistry, Botany, and Natural Philosophy, with the Formulas of the Principal Pharmacopœias, and valuable Practical Articles on the Treatment of Disease. On the Basis of Hooper and Grant. Adapted to the Present State of the Science, and for the Use of Medical Students and the Profession. By D. Pereira Gardner, M.D., Professor of Chemistry and Medical Jurisprudence in the Philadelphia College of Medicine. New York: Harper & Brothers, pp. 686, 8vo. Price \$2.50. Dr. Hooper's Medical Dictionary has been, since its first appearance in London, a standard in the profession. The edition on which the present work is based has been completely revised and considerably improved by Professor Klein Grant, a gentleman of distinguished medical celebrity, before its revision by Dr. Gardner, who has produced a dictionary entirely adapted to the use of medical students, retaining, at the same time, most if not all the practical matter of previous writers, so as to make it equally invaluable to the general practitioner. He has made an addition of several thousand articles, and more especially in the modern improvements in the departments of chemistry, physiology, surgery, and the practice of medicine. We warmly commend this work to the notice of our medical friends and apothecaries, and should judge that it would be indispensable to any member of the profession.

NORMAN'S SOUTHERN AGRICULTURAL ALMANAC, for 1848. Edited by Thomas Affleck, Esq. New Orleans: B. M. Norman, pp. 106, 12mo. This little publication is got up with much care and ability, and is devoted exclusively to the agricultural interests of the South; and in addition to the calendar, it contains sundry statistical tables and practical essays on the sugar and fodder crops, forest-trees and their uses, turpentine, rosin, pitch, tar, stable arrangements, &c., &c. To the manufacturer and dealer in agricultural implements and machines, in farm and garden seeds, to the grower of fruit-trees and shrubs, and the breeder of fine stock of every kind, the advertising pages will be found particularly useful.

THE PLANTATION RECORD AND ACCOUNT-BOOKS; by Thomas Affleck, of Washington, Mississippi. These are large, handsomely bound, blank books, arranged

for keeping every account and record required on the plantation. Mr. Affleck has rendered an important service to the planting community in thus placing under their appropriate head, all the subjects necessary to be known and recorded; and we are happy to learn that his taste and labor have not only been properly appreciated, but also well rewarded, considering the novelty of the undertaking and the short time they have been published.

Mr. B. M. Norman, the enterprising publisher at No. — Camp street, New Orleans, has got them up in a most attractive style, and every way worthy the patronage of the planters, which we trust they will abundantly receive.

LANDRETH'S RURAL REGISTER AND ALMANAC for 1848. This is an unpretending pamphlet of 100 pages, devoted to the interest of agriculture, horticulture, and rural economy, and may be profitably read by every farmer of the land. It is handsomely got up and illustrated by numerous engravings.

FAILURE OF THE ALPACA PROJECT.—In the June number of this journal, it was stated that the services of J. D. Williamson had been secured by the committee appointed by the American Agricultural Association, for the purpose of introducing the alpaca into this country, and that he was to proceed forthwith to Peru, free of charge, in one of the United States ships, for the procurement of the animals, &c. We are now authorized to announce, from one of the committee, that, owing to the state of the funds of the Association, it was not deemed expedient to attempt the introduction of the animals without more efficient means, and that the funds already raised for the object will probably soon be returned to the subscribers.

AMERICAN HEMP.—We learn from the St. Louis Reveille that the receipts of the dew-rotted hemp at that place since the beginning of the present year more than double those of the whole preceding year. The receipts this year amount to 72,394 bales, while those for the corresponding period last year were but 27,948 bales, and for the whole year 34,853 bales. The receipts for 1844 amounted to 59,292, and those for 1845 were 30,997 bales.

VEGETABLE CURIOSITIES.—The editor of the Rochester (N. Y.) Advertiser says:—"We were yesterday shown a limb of an apple-tree which had upon it within the space of *seventeen inches*, no less than *sixty-five* apples! They were placed upon the stick like kernels upon a corn-cob. Yesterday, we saw a cucumber which 'beats all.' The length is *three feet eleven inches and a fraction*. Also, a branch of a peach-tree about two feet long, which bore *sixty-three* peaches!"

POTATO PLANTING.—Mr. Edward Williams, of Mount Pleasant, Maury County, Tennessee, communicated to the Council the favorable result he had obtained by planting potatoes in furrows of which the bottom was covered with cotton-seed remaining in the ground under such circumstances without vegetating. From three ounces in weight of seed-potato, he obtained a produce of 17 lbs. under favorable circumstances. He ascribes the success of his plan to the oily nature of the seeds, and to the protection which they afford to the potato plant in the early state of its growth, in consequence of their mechanical texture and their resistance to rapid conduction.

LECTURES ON AGRICULTURE AND CHEMISTRY AT YALE COLLEGE.—We would call the attention of our readers to the lectures of Professors Norton and Silliman, advertised in another part of our columns, as being justly worthy of their patronage. Professor Norton, the public are already aware, has taken ample time and special pains to prepare himself, in Europe, for the honorable station he holds; and Professor Silliman is no less distinguished in knowledge of the branches he professes to teach. The opportunity is a favorable one, and we trust these lectures will receive ample support.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, OCTOBER 23, 1847.

ASHES, Pots,.....per 100 lbs.	\$6 50	to	\$6 56
Pearls,.....do.	8 00	"	8 06
BALE ROPE,.....lb.	5	"	6
BARK, Quercitron,.....ton.	33 00	"	35 00
BEANS, White,.....bush.	1 00	"	1 25
BEEFWAX, Am. Yellow,.....lb.	24	"	30
BOLT ROPE,.....do.	11	"	12
BONES, ground,.....bush.	45	"	55
BRISTLES, American,.....lb.	25	"	65
BUTTER, Table,.....do.	15	"	25
Shipping,.....do.	9	"	15
CANDLES, Mould, Tallow,.....do.	12	"	14
Sperm,.....do.	25	"	38
Stearic,.....do.	20	"	25
CHEESE,.....do.	5	"	10
COAL, Anthracite,.....3000 lbs.	5 00	"	6 00
CORDAGE, American,.....lb.	11	"	13
COTTON,.....do.	8	"	12
COTTON BAGGING, Amer. hemp,....yard.	15	"	16
FEATHERS,.....lb.	28	"	33
FLAX, American,.....do.	7 1/2	"	9
FLOUR, Northern and Western,.....bbl.	6 50	"	6 75
Fancy,.....do.	7 00	"	7 12
Southern,.....do.	6 38	"	6 69
Richmond City Mills,.....do.	—	"	—
Buckwheat,.....do.	—	"	—
Rye,.....do.	5 00	"	5 06
GRAIN—Wheat, Western,.....bush.	1 40	"	1 50
Southern,.....do.	1 10	"	1 38
Rye,.....do.	90	"	92
Corn, Northern,.....do.	73	"	75
Southern,.....do.	70	"	72
Barley,.....do.	78	"	81
Oats, Northern,.....do.	48	"	50
Southern,.....do.	44	"	47
GUANO,.....do.	2 50	"	3 00
HAY, in bales,.....100 lbs.	58	"	60
HEMP, Russia, clean,.....ton.	225 00	"	230 00
American, water-rotted,.....do.	160 00	"	220 00
American, dew-rotted,.....do.	140 00	"	200 00
HIDES, Dry Southern,.....do.	8	"	9 1/2
HOPS,.....lb.	8	"	11
HORNS,.....100.	2 00	"	10 00
LEAD, pig,.....do.	4 50	"	4 56
Sheet and bar,.....lb.	4 1/2	"	5 1/2
MEAL, Corn,.....bbl.	3 00	"	3 75
Corn,.....hhd.	17 50	"	18 00
MOLASSES, New Orleans,.....gal.	32	"	35
MUSTARD, American,.....lb.	16	"	31
NAVAL STORES—Tar,.....bbl.	2 31	"	2 38
Pitch,.....do.	81	"	1 00
Rosin,.....do.	60	"	75
Turpentine,.....do.	3 37	"	3 50
Spirits Turpentine, Southern,....gal.	49	"	50
OIL, Linseed, American,.....do.	65	"	75
Castor,.....do.	1 20	"	1 25
Lard,.....do.	80	"	85
OIL CAKE,.....100 lbs.	1 25	"	1 50
PEAS, Field,.....bush.	1 00	"	1 25
PLASTER OF PARIS,.....ton.	2 25	"	3 00
Ground, in bbls.,.....of 300 lbs.	1 12	"	1 25
PROVISIONS—Beef, Mess,.....bbl.	10 00	"	13 00
Prime,.....do.	7 00	"	9 00
Smoked,.....lb.	7	"	11
Rounds, in pickle,.....do.	5	"	7
Pork, Mess,.....bbl.	13 00	"	15 00
Prime,.....do.	10 00	"	12 00
Lard,.....lb.	10	"	11 1/2
Bacon sides, Smoked,.....do.	6	"	8
In pickle,.....do.	5	"	7
Hams, Smoked,.....do.	8	"	12
Pickled,.....do.	6	"	10
Shoulders, Smoked,.....do.	6	"	8
Pickled,.....do.	5	"	7
RICE,.....100 lbs.	3 88	"	5 00
SALT,.....sack.	1 40	"	1 50
Common,.....bush.	20	"	35
SEEDS—Clover,.....lb.	6	"	9
Timothy,.....do.	1 75	"	3 50
Flax, clean,.....7 do.	10 00	"	11 00
rough,.....do.	9 25	"	9 50
SODA, Ash, cont'g 80 per cent. soda,....lb.	3	"	3
Sulphate Soda, ground,.....do.	1	"	—
SUGAR, New Orleans,.....do.	6	"	9
SUMAC, American,.....ton.	35 00	"	37 00
TALLOW,.....lb.	9	"	10
TOBACCO,.....do.	3	"	8
WHISKEY, American,.....gal.	32	"	33
WOOLS, Saxony,.....lb.	35	"	60
Merino,.....do.	30	"	35
Half blood,.....do.	20	"	25
Common do,.....do.	18	"	20

REMARKS—Cotton has fallen from 2 to 2 1/2 cents per lb. since our last. Flour has advanced from 75 to 100 cents per barrel. Grain has followed in proportion. In other articles the change in prices is unimportant.

Money continues abundant and business good.

The Weather has been very favorable for getting in the fall crops, and we now have good accounts from the South, in regard to its great staples. The potato-rot is quite prevalent at the North, and we fear considerable losses of this valuable esculent.

ACKNOWLEDGMENTS.—List of Premiums awarded at the show of the Essex Co. (N. J.) Institute, held at Newark on the 24th of September; List of Premiums of the Hartford (Ct.) County Agricultural Society; List of Premiums of the Chittenden County (Vt.) Agricultural Society; List of Premiums of the Dutchess County (N. Y.) Agricultural Society; List of Premiums of the Greene County (N. Y.) Agricultural Society; Annual Descriptive Catalogue of Agricultural Implements, and Horticultural Tools, and Field, Grain, and Garden-Seeds, for sale at the Albany Agricultural Warehouse and Seed-Store by Luther Tucker.

TO CORRESPONDENTS.—Communications have been received from G. P. Lewis, W. Wheddon, E. S., C. N. Bement, A New Yorker, J. P. Norton, F.

S. J. J., of Shoalford, Ala., will find that the most effectual way of destroying sassafras bushes is to eradicate them root and branch with a plow or bush-puller. If this mode is too expensive he is recommended to try the plan suggested on p. 235, in our August number.

A Norway subscriber is informed that there are horse mowing machines in existence which work well in large level fields, but are useless on rough ground. We know of no machine better than the common scythe for mowing marshes where the ground is too soft to bear up a horse.

PUBLISHERS' NOTICE.

THE publishers respectfully request all persons indebted to them for the paper, or for advertisements (and those to whom bills have been sent), to remit the amount during this present month, November. A large number of subscribers are yet indebted for the Vol. for 1846, as also, for 1847, now near its close. The Agriculturist was continued to their address to save them trouble (a request being made in the January number that it might be returned if not wanted), and we hope no one will, through neglect, subject us to loss for the accommodation. The heavy expense of publishing our paper compels us to call upon our friends in this manner. The individual amounts due are quite small and apparently unimportant, but the aggregate is large and the receipt of these small amounts would enable us to go on with renewed zeal.

N. B. Persons forwarding Two dollars, will be furnished three papers for one year or one paper for three years; for five dollars eight copies will be furnished. All moneys should be sent to
C. M. SAXTON, 205 Broadway.

PERUVIAN GUANO.

FOR Sale at Bating Hollow, Long Island, by
AZEL DOWNS.

FOR SALE.

FOUR Merino Bucks, bred by David C. Collins, of Hartford, Ct., got by Mr. Collins' imported Rambouillet buck, Grandee, out of choice Ewes, selected from the flock of Mr. Blakeslee, Watertown, Ct. Inquire of A. B. Allen, 187 Water St.

A. STEVENS.

SUPERIOR SAXONY SHEEP.

THE Subscriber now offers for sale a superior lot of young Saxony Sheep, bred from a recent importation, selected expressly for him from the most celebrated flocks in Germany, by John A. Taintor, of Connecticut, when in Europe last year. Apply to

S. C. SCOVILLE, Salisbury, Ct.

or A. B. ALLEN, New York.

CRANBERRY PLANTS.

SEVERAL thousand Cranberry plants for sale, carefully done up in boxes, in quantities to suit purchasers. Price \$7 per thousand, or \$1 per hundred.

A. B. ALLEN & CO., 187 Water st., N. Y.

CORN-MILLS.

THE subscribers are now supplied with a newly invented Cast-Iron Mill, for grinding Corn and other Grain, either by hand or horse power. It will grind from 3 to 4 bushels per hour. Price \$30.00.

Also the hand Corn-Mill, which grinds from 1 to 1 1/2 bushels per hour. Price \$6.50.

These Mills are highly economical and convenient, and every farm and plantation ought to have them. They are simple in construction, not liable to get out of repair, and are easily operated. When one set of plates is worn out, they can be replaced by others at a trifling cost.

A. B. ALLEN & CO., 187 Water st., N. Y.

RECENTLY PUBLISHED

WEBSTER'S OCTAVO DICTIONARY, REVISED,

EMBRACING ALL THE WORDS IN THE NEW QUARTO EDITION.

BY HARPER & BROTHERS, 82 CLIFF STREET, NEW YORK.

DR. WEBSTER'S DICTIONARY OF THE ENGLISH LANGUAGE, Exhibiting the Origin, Orthography, Pronunciation, and Definition of Words, &c., in one handsome Volume, of nearly fourteen hundred pages. Sheep extra. Price \$3.50. Thoroughly Revised and considerably Enlarged. By Prof. CHAUNCEY A. GOODRICH, of Yale College; Assisted by a number of gentlemen distinguished for their high attainments in the various departments of learning, whose names will be found in the Preface.

The entire work has been re-stereotyped, and is now beautifully printed upon a new set of plates.

Several thousand additional words have been incorporated in this edition, embracing all the terms given in the new edition in the quarto form.

The *Synopsis* and *Walker's Key* to the classical pronunciation of Greek, Latin, and Scriptural proper names have been revised with much care and greatly improved.

A *Vocabulary*, giving the pronunciation of modern Geographical names, has been added to this edition.

Great attention has been given in the revision to the pronunciation. A large number of words having been re-spelled, it will now be found to be a complete *Pronouncing Dictionary*.

It has been made a *Synonymous Dictionary*; this new and as the publishers believe, very important feature, is not to be found incorporated in the same form into any other dictionary ever before published.

The utmost care has been given in every department of the work to render it the most perfect and satisfactory ever offered to the public. Considering its comprehensiveness, its numerous essential improvements and its general utility, it will be found one of the most indispensable and cheapest books of the times.

For a more particular statement of the principles on which the revision has been conducted reference is made to the preface of the work, a few brief extracts from which are subjoined.

"By successive revisions, the fruit of nearly three years of care and attention, a very great amount of valuable matter has been added. It is now made, in all important respects, consistent with the larger work, and presents, on a reduced scale, a clear, accurate, and full exhibition of the AMERICAN DICTIONARY in all its parts.

"One new feature is now added to this volume by making it a *Synonymous Dictionary*. Every one engaged in literary composition has felt at times the want of a work that shall present, under each of the important words, a list of others having the same general import.

"The chief value of a dictionary consists in its *definitions*—in giving a clear, full, and accurate exhibition of all the various shades of meaning which belong, by established usage, to the words of a language. It is in this respect especially, that Dr. Webster's dictionary has been generally considered superior to every other, both of this country and of England. To this point, therefore, the labors of the editor have been mainly directed. No efforts have been spared to obtain the most recent and valuable works, not only in lexicography, but in the various departments of science and the arts embraced in the *American Dictionary*. As these subjects are in a state of continual progress, every important word, in its various applications, has been diligently examined and compared with the statements made on each topic by the latest and most approved authorities.

"On the subject of *pronunciation* much labor has been bestowed. A careful comparison has been made with the latest authorities, and wherever changes seemed desirable, and could be made in consistency with the author's principles, they have been here introduced. The key to pronunciation has been somewhat enlarged, and the pointed letters have been used to a still greater extent. Many thousand words have been re-spelled, and no efforts have been spared to render the work, in all respects, a complete pronouncing dictionary.

"The *Synopsis* of Words differently pronounced by different Orthoepists, has been completely remodelled.

"Walker's Key to the Pronunciation of Classical and Scriptural Names, which was connected with this Dictionary as an Appendix, in the edition of 1829, has now been enlarged and improved. More than three thousand words have been added.

"The publishers of this work have been desirous to add to the volume a *Vocabulary* of Modern Geographical Words with their

proper pronunciation. They have accordingly had one prepared by an associate editor of Baldwin's Universal Pronouncing Gazetteer, an account of which will be found in the preface which accompanies the Vocabulary."

Extracts from Critical Notices.

"We have, in this fine octavo volume of fifteen hundred pages, closely yet clearly printed in double columns, the most complete and thorough manual of our language yet offered to the public. Such is the decision of some of the leading philologists of England, and such seems to be the growing conviction throughout our own country. The work, as originally prepared by Dr. Webster, was a monument of learning and ability which has won for him the most distinguished reputation. But since his death it has been subject to the constant, protracted, and earnest labors of a number of scientific and literary gentlemen, who have carefully revised every part of it, corrected all errors, added many thousands of words, enlarged and made more copious as well as more accurate the definitions, introduced throughout *synonyms* to the words, and in every possible way increased its value and its utility.

"The result of their labors has been the production of an English Lexicon, which cannot fail to come into universal use, not only in all schools and academies, but with every practical person and general reader, who, in making use of our language, would refer to the latest and most accessible authority. For this end, the present edition of Webster's Dictionary has been introduced in a form admirably adapted to give it that universal circulation to which, by its substantial merits, it is so well entitled."—*Literary World*.

"Thus it will be found equally valuable to the merchant, the scholar, and the general reader. The work is published in the usual excellent style of the Harpers, nothing is omitted that can be of service, and it undoubtedly is upon the whole the cheapest and best dictionary of any language in any country—a work which we consider to be a *sine quâ non* to the library or desk of all men.—*Island City*.

"The great value of every dictionary, intended for general use, consists in its *definitions*. In this respect, pre-eminence has universally been given to Webster; and it is mainly upon this department that the labors of his successors have been bestowed. The utmost pains have been taken to render every definition full, clear, and exact; and to effect this, the aid of scientific treatises, encyclopedias, and eminent men has been freely and constantly enjoyed. A dictionary of *synonyms* has been incorporated into the body of the work. We have no hesitation in pronouncing it to be, by all odds, the most complete, accurate and comprehensive English dictionary ever offered, at a price and in a form so cheap and convenient, to the American public."—*True Sun*.

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